PROSPECTIVE PAYMENT
ASSESSMENT COMMISSION

1990 ADJUSTMENTS TO THE MEDICARE PROSPECTIVE PAYMENT SYSTEM

REPORT TO THE CONGRESS

NOVEMBER 1989

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ASSESSMENT COMMISSION

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November 1989

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Chairman

Donald A. Young, M.D.
Executive Director

November 30, 1989

President of the Senate
United States Senate
Washington, D.C. 20510

Dear Mr. President:

I am hereby transmitting a report by the Prospective Payment Assessment Commission on the adjustments made by the Secretary, Department of Health and Human Services for the fiscal year 1990 Medicare prospective payment system. This report is provided as required by Section 1886(d)(4)(D) of the Social Security Act as amended by Public Law 98-21.

Sincerely,

Stuart H. Altman, Ph.D.
Chairman

Enclosure

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Speaker
U.S. House of Representatives
Washington, D.C. 20515

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NOVEMBER 1989 REPORT TO CONGRESS

EXECUTIVE SUMMARY

INTRODUCTION

Congress established the Prospective Payment Assessment Commission (ProPAC) in Public Law 98-21. ProPAC provides the executive and legislative branches of the government with analysis and advice on the Medicare prospective payment system (PPS). The Commission is an independent agency, with 17 members appointed by the congressional Office of Technology Assessment. Commissioners with expertise in health care delivery, financing, and research provide advice on the functioning of the hospital payment system through reports and recommendations to the Secretary of Health and Human Services and to the Congress.

Established as an adviser to both the Secretary and the Congress, ProPAC has steadily become more involved in advising Congress through the development and presentation of analytic studies and reports. The Commission has maintained its independence by stressing an analytic approach in developing its reports and recommendations. While the Commission recognizes the fiscal constraints facing government, it leaves the larger decisions related to overall budget priorities to the Administration and the Congress.

This report provides the Commission's views on the regulatory adjustments to PPS made by the Secretary for fiscal year (FY) 1990. The report is divided into eight major sections, which are highlighted below.

UPDATING PAYMENT RATES FOR INPATIENT SERVICES

PPS Update Factor -- Current law requires that the update in the prospective payment rates (for hospitals under PPS) and the target ceiling rates (for hospitals excluded from PPS) be equal to the increase in the hospital market basket, which is a measure of change in hospital input costs. The projected market basket increase for FY 1990 is 5.5 percent. However, the Secretary recommends an average update, that is consistent with the Administration's budget proposal, equal to the market basket increase minus 1.5 percent. The Secretary also recommends higher updates for hospitals located in rural areas and large urban areas. However, the Secretary does not specify what these updates should be.

The Commission believes that the update recommended by the Secretary, in combination with the reduction in DRG relative weights discussed below, will result in PPS rates that are insufficient to maintain a fair level of payment for hospitals

The aggregate PPS operating margin is projected to be zero or below for FY 1989, with a majority of hospitals expected to experience negative PPS operating margins. The Commission believes that the Secretary's recommendation may place many hospitals in

further financial jeopardy and threatens the basic objectives of PPS. Furthermore, the Commission believes that the impact of this recommendation on the future of quality of care provided to Medicare beneficiaries and their access to health care services needs to be considered.

Market Basket -- The Commission recommended that the hospital industry wage potion of the market basket be increased to better reflect changes in hospital and other labor markets. The Commission is pleased that the Secretary will, as part of the next periodic rebasing of the market basket, re-examine the role of hospital input prices. The current market basket gives inadequate recognition to the unique characteristics of the hospital labor market. Giving equal weight to hospital and non-hospital wage measures would more appropriately reflect changes in the markets in which hospitals must establish their wage and benefit levels. The Commission, therefore, strongly encourages the Secretary to adopt its recommendation on revising the market basket structure.

ADJUSTMENTS TO THE PPS PAYMENT FORMULA

Indirect Teaching Adjustment -- In its 1988 report to the Secretary of Health and Human Services, the Commission recommended that the indirect costs of medical education be accommodated in the PPS structure through an empirically-derived payment adjustment. Consequently, the Commission analyzed the effect of teaching effort on Medicare costs. Statistical analysis conducted by ProPAC found that after controlling for case-mix, area wages, urban/rural location, outlier payments, and low-income patient share, Medicare costs per case for teaching hospitals were on average 4.4 percent higher than costs for nonteaching hospitals for every increment of 0.1 in the number of interns and residents per bed. This analysis used hospital cost data from the PPS3 Medicare Cost Report (MCR) file, which was the most recent MCR file available at the time, and a simulation model that reflected FY 1989 PPS payment rules.

The Commission, however, believes it is important to consider the overall financial position of institutions that serve Medicare beneficiaries, in addition to Medicare costs and payments, when developing Medicare payment policy. Analysis has shown that, through the third year of PPS, teaching hospitals had significantly higher PPS margins than nonteaching hospitals. Examination of more recent data on overall financial status, however, shows that major teaching hospitals have considerably lower total margins than minor teaching and nonteaching hospitals.

The Commission, therefore, recommended that the Secretary seek legislation to reduce the indirect medical education (IME) adjustment from its current level of 7.7 percent to 6.6 percent for FY 1990. This reduction should be implemented in a budget neutral fashion, with the savings returned to all hospitals through corresponding increases in the standardized payment amounts. Further, the Commission believes that continued evaluation of the level of the teaching adjustment is necessary prior to any further change.

The Secretary agrees with the Commission that the IME adjustment should be reduced. However, the Secretary believes it should be reduced immediately to 4.05 percent. The Secretary cites a 1985 study conducted by the Congressional Budget Office (CBO) that

showed that the average cost per Medicare discharge increases by 4.05 percent for every increase of 0.1 in the intern/resident to bed ratio.

The Commission is disappointed with the Secretary's response to this recommendation. The Commission believes that the teaching adjustment should be based on an empirically-derived estimate of the relationship between teaching effort and Medicare cost per case, using the most recent data available. However, while the Secretary's recommendation falls within the range of estimates reported in recent analyses by CBO and the General Accounting Office, the broader implications of such a reduction must also be considered.

Area Wage Index -- The Commission recommends that the Secretary collect more current data on hospital wages and hours of employment and use these data to update the wage index for fiscal year 1990. The Secretary changed the data base for computing the area wage index from a blend of 1982 and 1984 data to exclusively 1984 data. The Secretary is now collecting more recent data to update the wage index for FY 1991.

The Commission believes that variations in the occupational mix of hospital employment across labor market areas may lead to a significant bias in the wage index. A rough estimate of this effect may be obtained from 1980 Census data. While these data are limited, they may provide a useful, although conservative, test of the need for an occupational mix adjustment to the wage index.

As a result, the Commission recommended an assessment of whether the benefits of an occupational mix adjustment outweigh the burden of data collection. The Commission will investigate this issue over the next few methods and share its findings with the Secretary.

RURAL HOSPITALS

The Commission is concerned about the problems affecting rural hospitals and the rural health care system, as well as the implications of these problems for access to needed health care. The Commission has recommended several modifications to PPS that have assisted rural hospitals. For example, the Commission recommended higher update factors for rural hospitals; an extension of the volume adjustment to rural hospitals eligible for sole community hospital designation; and clarification of other sole community hospital provisions.

The Commission's analytic work also has been made available to others seeking solutions to rural hospital payment problems. For example, the change from hospital-weighted to discharge-weighted standardized amounts was based on the technical work of the Commission. This change which was implemented in FY 1988, raised rural hospital payments by approximately 3 percent. Similarly, the separate financing of outlier payments for urban and rural hospitals, adopted in FY 1987, was based on the Commission's analysis of the distribution of outlier payments. Furthermore, ProPAC commissioned a study by SysteMetrics, Inc. that examined the travel distance between rural hospitals and market

share, among other things. Findings from this study have been incorporated in several legislative proposals and in the Secretary's final rule on sole community hospitals.

Sole Community Hospitals (SCH) -- The Commission is pleased that the Secretary has eliminated the market share requirement for hospitals located more than 35 miles from a similar hospital. As it has recommended in the past, the Commission supports further evaluation and clarification of the criteria used for SCH designation.

Beneficiary Access to Care in Rural Areas -- The Commission agrees with the Secretary that the rural health care system is in a period of profound change. In its March 1989 report, the Commission expressed its concern about the problems affecting rural hospitals and the rural health care system, as well as the implications of these problems for access to needed health care.

Rural Referral Centers (RRCs) -- The Commission believes that the Secretary should reevaluate the thresholds enabling a rural hospital to qualify as a rural referral center. Although the criteria RRCs must meet are statutorily required, both the number of discharges and case-mix index should be evaluated for their appropriateness as criteria for designation. Furthermore, the Commission believes that any changes in PPS policy should be implemented in a budget neutral fashion.

RECALIBRATION OF DRG RELATIVE WEIGHTS

Method of Recalibration -- The Commission has, for the past several years, recommended that the DRG weights be recalibrated using cost information. While the Secretary examined this recommendation, charge data were again used to recalibrate the weights for FY 1990. The DRG weights are intended to reflect the average relative costliness of different types of cases. ProPAC continues to believe that weights based on estimated costs, which are derived by adjusting charge data for differences in hospitals' pricing practices, achieve this objective much better than weights based on unadjusted charge data. The resulting distribution of payments across DRGs and hospitals would more accurately reflect the costliness of different types of cases and provide incentives more consistent with the objectives of PPS. By utilizing charges, the current method is partly affected by hospital behavior that may represent only business strategy and results in weights that could adversely affect various institutions.

Charge-based weights result in higher weights for surgical DRGs and lower weights for medical DRGs than cost-based weights. They also result in higher payments for urban hospitals and teaching hospitals than would be the case with cost-based weights. The distributional effects of cost-based weights thus seem to be more consistent with current directions in PPS payment policy.

Cost-based weights would not be as sensitive to hospital pricing practices as are charge-based weights. They also would remove the effects of direct medical education and capital costs. These costs are recognized separately from by the PPS payment rate but cannot be removed from the charge data. Although the Commission recognizes the shortcomings of

the current methodology for estimating case-level costs, we assert that the cost-based approach to the recalibration of the DRG weights is the preferred approach.

Adjustment of DRG Weights for Effects of Grouper Changes -- The Secretary reduced the DRG weights by 1.22 percent, claiming that this reduction was necessary to account for case-mix increase due solely to changes in the Grouper.

Adjusting for the effect of changes in the Grouper is only a part of the larger issue of how to account for case-mix change under PPS. Each year, the Commission explicitly considers the effects of real changes in the case-mix index, upcoding and changes in within-DRG case complexity in developing its recommendation on the update of the PPS rates. By incorporating case-mix change into its update recommendation, the Commission can account for the effects of both real changes and those due to upcoding, and adjust hospital payments appropriately.

The reduction in DRG weights, on the other hand, is neither a complete nor an accurate way to adjust for case-mix change. The Commission strongly objects to the additional reduction in PPS payments through the adjustment of the DRG weights.

INPATIENT CLASSIFICATION AND CASE MIX

Reassignment of Patients with Guillain-Barre Syndrome (GBS) -- The Commission recommended that the Secretary reassign patients with GBS to DRG 20 (nervous system infection except viral meningitis), DRG 34 (other disorders of nervous system with complications or comorbidities (CC), or create a new DRG. The Secretary has chosen not to reclassify GBS patients in FY 1990. However, the Secretary agrees that these patients consume more resources than others in the same DRG and has begun to study their costs.

ProPAC strongly believes that PPS must be sufficiently flexible to correct such payment inequities in a timely fashion. Serious consideration should be given to ways of improving payments for these patients.

Mechanical Ventilation - Diseases and Disorders of the Respiratory System (MDC 4)-- The Commission continues to be concerned about costly tracheostomy and mechanical ventilation cases outside of MDC 4, and encourages the Secretary to develop more appropriate classification of these cases.

Acute Myocardial Infarction (AMI) -- New Codes -- The Commission supports the Secretary's institution of new fifth-digit codes for cases of myocardial infarction (MI). These codes would identify non-acute MI cases currently assigned to DRGs 121 and 122 (circulatory disorders with AMI and cardio-vascular complication discharged alive with or without CC) and reassign them to a more appropriate DRG in terms of both clinical characteristics and resource use. This action would also result in more appropriate payment weights in the long run for acute MI cases assigned to these DRGs.

The Commission is concerned, however, about short-term payment inequities that would persist in the interim period for cases remaining in these DRGs. The FY 1990 weights for DRGs 121 and 122 are based on all cases currently assigned to these DRGs, which include both acute and non-acute MI cases. These non-acute cases have much lower resource use compared with acute cases. Including them in the calculation of the weights results in lower payments for acute cases. The non-acute cases will likely receive more appropriate payments, since they will be reassigned to more appropriate DRGs. The cases remaining in these DRGs will be more clinically homogeneous and more costly. However, until recalibration for FY 1991, their payment weights will partially the reflect lower costs of the non-acute cases.

Refinement of Complications and Comorbidities List --The Secretary implemented a limited revision of the CC exclusions list, which would correct errors in the list and both add and delete a number of CCs. A number of four-digit codes were deleted and replaced with more specific five-digit codes. The Commission supports the Secretary's refinement and revision of the CC list.

DRG Refinements -- The Commission recommended that the Secretary begin immediately to thoroughly evaluate the potential consequences of adopting the DRG refinements developed by Yale University. Preliminary results indicate that these refinements substantially improve the ability of the DRGs to distinguish patients who are expected to have relatively high or low resource needs from other patients.

The Secretary agrees that a full assessment of the DRG refinements is necessary. The Commission will work with the Secretary in this effort.

IMPROVING THE COST DATA USED FOR DECISION MAKING

The Commission recommended that the Secretary initiate the developmental work necessary to secure the future role of the Medicare Cost Report as a vital information source for payment policy evaluation and decision making. Efforts to improve the cost report should also minimize the administrative burden on hospitals, fiscal intermediaries, and the Health Care Financing Administration (HCFA).

ProPAC believes that the goals of HCFA's cost reporting demonstration project do not encompass a broad examination of the current cost report. This examination must begin with a determination of the data needed to support future decision making, and then reconcile these needs with the desire for data consistency, accuracy and timeliness, as well as reduced reporting burden.

AMBULATORY SURGERY PAYMENT

Medicare Payment for Hospital Outpatient Surgery -- The Commission recommended that, as an interim measure, Medicare payment for hospital outpatient (OPD) surgery be entirely prospective. The Secretary disagreed with this recommendation. The Secretary's disagreement is based on two stated principles -- first, that Medicare outlays should be no greater under the proposed system than under current law; and second, that payment differences between OPDs and freestanding ambulatory surgery centers (ASCs) should be based on justifiable cost differences.

The Commission agrees with these basic principles and believes that its recommended approach is consistent with the Secretary's goals. ProPAC's approach calls for a fundamental change in Medicare payment for hospital outpatient surgery -- an entirely prospective amount, including capital. We believe that such a change is essential for achieving many of the system goals that ProPAC, the Secretary, and the Congress share. Fully prospective payments give hospitals an opportunity to earn a profit or risk a loss, thereby rewarding increased efficiency. Further, a policy based on prospective rates allows for controlling the growth of payments through an annual updating process.

Beneficiary Liability for Hospital Outpatient Surgery -- The Commission further recommended that the method for calculating Part B coinsurance for OPD surgery be modified. The Commission believes that the current policy, which computes coinsurance on the basis of submitted charges, unfairly penalizes the beneficiary. The Secretary stated that, since it is not adopting the proposed payment changes, this recommendation cannot be implemented.

EVALUATION OF PRO REVIEW AND QUALITY OF CARE

The Commission recommended that a thorough examination of the impact of PROs on quality of care for Medicare beneficiaries be undertaken. The Secretary indicated that several evaluation processes are in place for assessing the effectiveness of PROs. The Commission supports efforts underway to develop the means to monitor the outcomes of refinement to current PRO review activities. However, ProPAC believes the Secretary needs to continue to study ways of modifying and improving current review activities.

SECTION I.

INTRODUCTION

In 1983, Congress enacted a major reform in Medicare payment policy: the prospective payment system (PPS). PPS is a system of prospectively set prices that is updated annually, with certain adjustments to meet policy goals and to account for conditions beyond the control of individual hospitals. The system, which altered payment of inpatient hospital services for Medicare beneficiaries, offers opportunities and challenges to the government and to providers of health care services.

Concerned about the need to monitor and update the new system, Congress established the Prospective Payment Assessment Commission (ProPAC) in Public Law 98-21 -- the same legislation that created PPS. ProPAC provides the executive and legislative branches of the government with analysis and advice on PPS issues. The Commission is an independent agency, with 17 members appointed by the congressional Office of Technology Assessment. Commissioners with expertise in health care delivery, financing, and research provide advice on the functioning of the hospital payment system through reports and recommendations to the Secretary of Health and Human Services and to the Congress.

Established as an adviser to both the Secretary and the Congress, ProPAC has steadily become more involved in advising Congress through the development and presentation of analytic studies and reports. The Commission has maintained its independence by stressing an analytic approach in developing its reports and recommendations. While the Commission recognizes the importance of fiscal constraints facing the government, it leaves the larger decisions related to overall budget priorities to the Administration and the Congress.

This report provides the Commission's views on the regulatory adjustments made to PPS by the Secretary for fiscal year 1990. ProPAC's recommendations in its March 1, 1989 *Report and Recommendations to the Secretary* were considered by the Secretary, as required by statute. His response to the recommendations were described in the proposed rule issued May 8, 1989.

The Secretary issued the final rule on adjustments to PPS September 1, 1989. These regulations, in general, are effective for discharges or cost reporting periods beginning on or after October 1, 1989.

The Commission has been pleased with the Secretary's response to some of the recommendations made over the past five years. The recommendations adopted by the Secretary include the following:

- Hospital Market Basket -- The Secretary implemented additional occupational categories and rebased the market basket weights as recommended in 1985. In addition, a feasibility study of using the employment cost index was

evaluated. Further, the Secretary will re-examine the role of hospital input prices as recommended in 1989.

- Area Wage Index -- The Secretary implemented aspects of the area wage index as recommended by the Commission in 1987. In addition, the Secretary is collecting 1988 wage data as recommended in 1989.

- Outlier Payment Policy -- The Secretary implemented new outlier payment policies consistent with the Commission's recommendation in 1988.

- DRG Classification -- The Secretary implemented several of the Commission's recommendations regarding DRG classification improvements, including the reclassification of percutaneous transluminal coronary angioplasty (1985), extracorporeal shock wave lithotripsy (1986), lymphomas and leukemia (1986), upper extremity procedures (1986), and elimination of age in most cases as a variable for DRG assignment (1987).

- Rural Hospitals -- The Secretary implemented several recommendations including: volume protection to small rural hospitals (1987), evaluation of sole community hospital policies (1988), designation criteria for sole community hospitals (1988), research on rural health care issues (1989).

In addition, the Secretary continues to work closely with ProPAC in several areas. For instance, both organizations are jointly funding a research project that involves reabstracting medical records to improve our understanding of case-mix change. In addition, ProPAC and the Secretary are working on improving cost data used for decision making and measurement of case mix.

Several of the Commission's recommendations, while not implemented by the Secretary, were legislated by Congress. These recommendations include:

- Disproportionate Share Adjustment (1985) -- This adjustment was enacted by Congress in 1986.

- Annual Recalibration of DRG Weights (1985) -- As a result of legislation, the Secretary is required to recalibrate DRG weights annually.

- PRO Review of Outpatient Surgery (1986) -- Review of certain procedures was mandated by Congress.

- Recalculating the Inpatient Deductible (986) -- Congress revised the formula for calculating the inpatient deductible.

While the Commission is pleased by these efforts, there are other areas that continue to cause concern. As the responsibility initially assigned to the Secretary to update payment rates has shifted, so has the depth of analytic and quantitative data. For instance, ProPAC developed and has followed a uniform format for considering elements that should be

reviewed in the context of the update factor. The Secretary initially provided some detail on the basis of the update factor decision making in the fiscal year 1985 regulation, but analytic justification for the update and payment amount decisions has diminished in subsequent annual PPS regulations. The Commission regrets that the Secretary has chosen to eliminate the development of quantitative and analytic justification for decision making. This lack of justification may reflect the fact that the budget has increasingly driven decision making by both the Secretary and the Congress.

In addition, ProPAC strongly believes that the Secretary must ensure that PPS is sufficiently flexible to correct payment inequities in a timely fashion. This concern is based on several problems identified with patient classification, such as patients with Guillian-Barre syndrome.

The remainder of this report is divided into the following sections:

- Updating payment rates for inpatient services;
- Adjustments to the PPS payment formula;
- Rural hospitals;
- Recalibration of DRG relative weights;
- Patient classification and case mix;
- Improving the cost data used for decision making;
- Ambulatory surgery payment; and
- Evaluation of PRO review and quality of care.

Appendixes to this report contain a summary of fiscal year 1990 regulations, a comparison of Commission's recommendation and final regulations, DRG weight changes from fiscal year 1989 to fiscal year 1990, and biographical sketches of the Commissioners.

SECTION II.

UPDATING PAYMENT RATES FOR INPATIENT SERVICES

In the Omnibus Budget Reconciliation Act of 1986 (OBRA 1986), Congress assumed the authority for updating both the payment rate for hospitals under the prospective payment system (PPS) and for setting the target rate of increase for hospitals and hospital units excluded from PPS. Current law requires that the update in the prospective payment rates and the target ceiling rates be equal to the increase in the market basket, which is a measure of the change in hospital input costs. The projected market basket increase for fiscal year 1990 is 5.5 percent. The Secretary is also required to publish a proposed update factor, taking into consideration the recommendation of ProPAC, by May 1 of each year and a final update recommendation by September 1.

A. PPS Update Factor

The Secretary recommends an average update that is consistent with the Administration's budget proposal, equal to the market basket increase minus 1.5 percent. In addition, the Secretary is adjusting the DRG relative weights for the effect of changes in the Grouper program on the case-mix index. This amounts to a further administrative reduction in per-case payment rates of 1.22 percent. The total net effect of the Secretary's proposal is to update the PPS rates by 2.78 percent, or market basket minus 2.72 percent.

The Secretary also recommends higher updates for hospitals located in rural areas and large urban areas. However, the Secretary does not specify what these updates should be.

The Commission believes that the update recommended by the Secretary, in combination with the reduction in the DRG relative weights, will result in PPS rates that are insufficient to maintain a fair level of payment for hospitals under PPS.

The aggregate PPS operating margin is projected to be zero or below for fiscal year 1989, with a majority of hospitals expected to be experiencing negative PPS margins. The Commission believes that the Secretary's recommendation may place many hospitals in further financial jeopardy and threatens the basic objectives of PPS. Furthermore, the Commission believes that the impact of this recommendation on the quality of care provided to Medicare beneficiaries and their access to health care services needs to be considered.

Moreover, while the Secretary listed in the final rule five factors he considered in developing the update recommendation, it is unclear how these factors were used. The Commission believes the Secretary should use a logical and consistent framework for developing his update recommendations. Without this type of framework, there is the

danger that the recommendation could be interpreted as arbitrary and driven solely by budgetary considerations.

The Commission's original update factor recommendation, contained in the March 1, 1989 *Report and Recommendations to the Secretary*, was based on a market basket forecast of 5.6 percent for FY 1990 and a 0.6 percent correction for FY 1989 forecast error. As a result, the Commission recommended an average update factor of 4.9 percent. The update factor for hospitals in rural areas would have been 5.6 percent, in large urban areas 5.0 percent, and in other urban areas 4.5 percent. The revised market basket forecast was subsequently lowered to 5.5 percent with the elimination of the forecast error correction.

Therefore, the Commission's update factor recommendation, based on the market basket forecast in the final rule, averages 4.1 percent (see Table 1). The update for hospitals in rural areas would be 4.8 percent, and for hospitals in large urban areas and other urban areas, 4.2 percent and 3.7 percent, respectively.

Table 1.Estimated PPS Update Factors for Fiscal Year 1990 Under ProPAC Recommendations, Modified in September 1989 for Revised Market Basket Forecast

Total Update Factor	
Average update factor	4.1%
Large Urban	4.2
Other Urban	3.7
Rural	4.8
Components of the Update Factor	
Components applied to all hospitals:	
Revised fiscal year 1990 market basket forecast*	5.5%
Correction for fiscal year 1989 forecast error	0.0
Components of discretionary adjustment factor	
Scientific and technological advancement	--
Productivity	--
Total discretionary adjustment factor	0.0
Case-mix change	
Total DRG case-mix index change	-3.0
Real DRG case-mix index change	1.5
Within-DRG patient complexity	0.8
Net adjustment for case mix change	-0.7
Components applied to urban hospitals only:	
Third-year phased reduction to standardized amounts	
Adjustment for large urban areas	-0.8
Adjustment for other urban areas	-0.8
Urban population differential	
Adjustment for large urban areas	0.2
Adjustment for other urban areas	-0.3

*Market basket forecast is HCFA market basket, not the one based on the Commission's market basket recommendation.

B. Market Basket

The hospital market basket measures the prices of goods and services purchased by hospitals. The Commission recommended that the hospital industry wage portion of the market basket be increased to better reflect changes in hospital and other labor markets. This recommendation would increase the internal wage share of the hospital occupational index.

The Commission is pleased that the Secretary will, as part of the next periodic rebasing of the market basket, re-examine the role of hospital input prices. The current market basket gives inadequate recognition to the unique characteristics of the hospital labor market. Giving equal weight to hospital and non-hospital wage measures would more appropriately reflect changes in the markets in which hospitals must establish their wage and benefit levels. The Commission, therefore, strongly encourages the Secretary to adopt its recommendation on revising the market basket structure.

C. Update Factor for Excluded Hospitals and Distinct-Part Units

Certain types of hospitals and distinct-part units are excluded from PPS. These hospitals and units are reimbursed on the basis of cost, subject to target limits enacted in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). Like PPS rates, the increases in the target rates are set annually.

The Secretary recommends that the target rate of increase for excluded hospitals and distinct-part units be higher than the recommended average PPS update, which is equal to the market basket increase minus 1.5 percentage points. The Secretary, however, does not specify what it should be.

The Commission agrees with the Secretary that an update greater than market basket increase minus 1.5 percentage points is warranted for these hospitals. The Commission believes this update should equal the increase in their own market basket (except for pediatric facilities, for which the update should equal the PPS market basket increase). The Commission is pleased that the Secretary is evaluating the impact of a separate PPS-exempt market basket.

Furthermore, the Commission believes an assessment of the impact and effectiveness of the TEFRA program is warranted. Data are not currently available on changes in costs and payments for these facilities. The Commission plans to examine this issue and looks forward to working with the Secretary in this effort.

SECTION III.

ADJUSTMENTS TO THE PPS PAYMENT FORMULA

Under PPS the basic prospective payment rate is adjusted to reflect certain additional factors that affect costs. Payments to hospitals with approved medical education programs are adjusted to account for the indirect cost of these programs. Hospitals that serve a disproportionate share of low income patients also receive additional payments. Further, hospital payments are adjusted to reflect differing wage markets. Moreover, additional amounts are paid to hospitals for atypical cases. This section describes some of these adjustments. Special adjustments made to rural hospitals' payments are summarized later.

A. Indirect Medical Education Adjustment

Under PPS, teaching hospitals receive an adjustment to their payments based on their level of teaching effort. This adjustment recognizes the higher costs associated with teaching. Some factors contributing to these higher costs are more severely ill patients, the greater use of ancillary services, location in inner cities, and a more costly mix of staffing and facilities.

In its 1988 report to the Secretary of Health and Human Services, the Commission recommended that the indirect costs of medical education should be accommodated in the PPS structure through an empirically-derived payment adjustment. The Commission stressed that since PPS has moved to fully national rates, sources of hospital cost variation are recognized to a lesser degree in the basic payment to hospitals. Equity of payments to hospitals has therefore become increasingly dependent on the use of payment adjustments founded in sound data analysis.

In keeping with its 1988 recommendation, the Commission analyzed the effect of teaching effort on Medicare costs. Statistical analysis conducted by ProPAC found that after controlling for case-mix, area wages, urban/rural location, outlier payments, and low-income patient share, Medicare costs per case for teaching hospitals were on average 4.4 percent higher than for nonteaching hospitals for every increment of 0.1 in the number of interns and residents per bed. This analysis used hospital cost data from the PPS3 Medicare Cost Report file, the most recent file available at the time, and a simulation model reflecting fiscal year 1989 PPS payment rules.

Analysis has shown that through the third year of PPS, teaching hospitals had significantly higher PPS margins than nonteaching hospitals. However, the Commission believes it is important to consider the overall financial position of institutions that serve Medicare beneficiaries, in addition to Medicare operating margins, when developing Medicare payment policy. Examination of more recent data on overall financial status shows that major teaching hospitals have considerably lower total margins than minor teaching and nonteaching hospitals. Concern about the impact of precipitously lowering payments to teaching hospitals led the Commission to recommend only one-third of the total reduction implied by the current empirical estimate.

The Commission, therefore, recommended that the Secretary seek legislation to reduce the indirect medical education (IME) adjustment from its current level of 7.7 percent to 6.6 percent for FY 1990. This reduction should be implemented in a budget neutral fashion, with the savings returned to all hospitals through corresponding increases in the standardized payment amounts. Further, the Commission believes that continued evaluation of the level of the teaching adjustment is necessary prior to any further change.

The Secretary agrees with the Commission that the IME adjustment should be reduced. However, the Secretary believes it should be reduced immediately to 4.05 percent. The Secretary cites a 1985 study conducted by the Congressional Budget Office (CBO) that shows the average cost per Medicare discharge increases by 4.05 percent for every increase of 0.1 in the intern/resident to bed ratio.

In addition, the Secretary believes that teaching hospitals have fared exceptionally well under PPS, as evidenced by their PPS operating margins, and therefore are able to absorb the full reduction in the IME adjustment. Further, the Secretary believes that payment to other hospitals is adequate, and that any change in the IME adjustment should not be implemented in a budget neutral fashion.

The Commission is disappointed in the Secretary's response to its recommendation. The Commission strongly believes that the teaching adjustment should be based on an empirically-derived estimate of the relationship between teaching effort and Medicare cost per case, using the most recent cost data available. However, while the Secretary's recommendation falls within the range of estimates reported in recent analyses by CBO and the General Accounting Office, the broader implications of such a reduction must also be considered.

Further, the Commission believes that in order to ensure equitable distribution of payments to hospitals, a reduction in payments to teaching hospitals through the IME adjustment should be accompanied by a redistribution of these dollars through corresponding increases in the basic payment rates for all hospitals. If this budget neutrality adjustment is not made, then the average payment to all hospitals would be inappropriately lowered.

Finally, the Commission believes that sound payment policy under PPS necessitates the gradual lowering of the IME adjustment. The Commission intends to continue its analysis of the relationship between teaching effort and Medicare cost per case. It will annually assess whether the teaching adjustment should be lowered further.

B. Area Wage Index

The area wage index is used to adjust PPS payments to hospitals according to geographic variations in wage levels. The Commission recommended that the Secretary collect more current data on hospital wages and hours of employment and use these data to update the wage index for fiscal year 1990. In addition, the Commission urged the Secretary to develop a mechanism for obtaining accurate hospital wage data annually.

The Secretary changed the data base for computing the area wage index from a blend of 1982 and 1984 data to exclusively 1984 data. In addition, the Secretary developed two survey forms to collect data for the FY 1991 update of the wage index, as required by OBRA 1987. However, before implementing this updated wage index or deciding about future collection of data by occupational categories and incorporating future wage survey forms into the hospital cost report, the Secretary solicited comments on issues including,

- Should the wage index include data on contracted labor?
- Which fringe benefits should be included in the wage index, and how should they be valued?
- If occupational data were collected, what formula or methodology should be used in calculating an occupational mix index?
- Should the survey form, HCFA Form 2561, be incorporated into the hospital cost report?

In a letter to HCFA dated September 28, 1989, the Commission stated its belief that variations in hospital occupational mix across labor market areas may lead to a significant bias in the wage index. A rough estimate of this effect may be obtained from 1980 Census data. While these data are limited, they may provide a useful, although conservative, test of the need for an occupational mix adjustment to the wage index.

As a result, the Commission recommended an assessment of whether the benefits of an occupational mix adjustment outweigh the burden of regular data collection. The Commission will investigate this issue over the next few months and share its our findings with the Secretary.

C. Outlier Payment Policy

The Commission recommended in an earlier report that payment for outlier cases that qualify as both day and cost outliers be based on the method that provides the greatest reimbursement. The Secretary agreed and implemented this change beginning in fiscal year 1988.

Additional amounts are paid to hospitals for atypical cases (outliers) which have either extremely long stays (day outliers) or extraordinary costs (cost outliers) relative to other cases in the same DRG. These payments are intended to provide compensation to hospitals that treat such cases. Payments for outlier cases are based on a marginal cost factor. Payments for cost outliers are computed by multiplying the marginal cost factor (75 percent) times the difference between adjusted charges and the cost thresholds. Payments for day outliers are derived by multiplying the marginal cost factor (60 percent) times the per diem federal DRG rate for each day beyond the length of stay threshold. Some cases qualify as both day and cost outliers (dual outliers). Payment for dual outliers is determined based on the method that provides the greatest reimbursement.

The Secretary continued to set outlier thresholds so that estimated outlier payments equal 5.1 percent of total PPS payments. The fiscal year 1990 thresholds for day outlier cases are the geometric length of stay for each DRG plus the lesser of 28 days or 3 standard deviations; for cost outlier cases, the greater of 2.0 times the DRG payment rate or $34,000.

These thresholds are expected to maintain the current outlier payment split, with 34 percent of cases being paid using the cost outlier methodology and 66 percent using the day outlier methodology. As a percent of outlier payment, 46.2 percent would be for day outlier cases, and 53.8 for cost outlier cases. This payment split is consistent with the Commission's recommendation.

D. Burn Outlier Payment Policy

Concerned with the adequacy of payment for burn outlier cases, Congress increased the marginal cost factor for these cases to 90 percent for both day and cost outliers in OBRA 1987. This change was temporary and expired at the end of fiscal year 1989.

The Commission recommended, as an interim measure, that burn outlier cases be paid under a cost-only outlier policy.[1] Our analysis indicated that this method better reflects differences between resource use in specialized burn centers and other PPS hospitals. While the Secretary noted that this recommendation may target more burn outlier payments to specialized burn treatment centers, he does not have the authority to eliminate day outlier payments. However, the Secretary notes that specialized burn centers tend to treat more cases qualifying as cost outliers and that a higher marginal cost factor is appropriate.

The Secretary modified the payment policy for burn outlier cases. This policy will pay cost outlier cases at 90 percent of the marginal cost factor (higher than the 75 percent used for other cost outlier cases), and will reduce day outlier payments from 90 to 60 percent of the marginal cost factor (equal to other day outlier cases). Dual outlier cases will be reimbursed under the method that provides the greatest payment.

The Commission agrees that the Secretary's change is an improvement over current law. Our analysis found that this method reduced the losses associated with treating burn cases at specialized centers.

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[1] *Report to Congress and the Secretary of the Department of Health and Human Services on Outlier Payment Alternatives for Burn Cases*, Prospective Payment Assessment Commission, July 1988.

SECTION IV.

RURAL HOSPITALS

The Commission is concerned about the problems affecting rural hospitals and the rural health care system, as well as the implications of these problems for access to needed health care.

In its March 1986 recommendations, the Commission noted that its preliminary studies indicated potential problems in the treatment of rural hospitals under PPS. ProPAC urged the Secretary to evaluate and, where appropriate, modify payment policies for rural hospitals. Since that time, the Commission has recommended several modifications to PPS that have assisted rural hospitals. For example, the Commission recommended higher update factors for rural hospitals; an extension of the volume adjustment to rural hospitals eligible for sole community hospital designation; and clarification of other sole community hospital provisions.

The Commission's analytic work also has been made available to others seeking solutions to rural hospital payment problems. For example, the change from hospital-weighted to discharge weighted standardized amounts, which was implemented in FY 1988, raised rural hospital payments approximately 3 percent. This change was based entirely on the technical work of the Commission. Similarly, the separate financing of outlier payments for urban and rural hospitals, adopted in FY 1987, was based on the Commission's analysis of the distribution of outlier payments. Furthermore, ProPAC commissioned a study by SysteMetrics that examined the travel distance between rural hospitals and market share, among other things. Findings from this study have been incorporated in several legislative proposals and in the Secretary's final rule on sole community hospitals.

The Commission recognizes, however, that the problems facing rural hospitals extend beyond PPS and Medicare. For this reason, the Commission has urged the Secretary to pursue a comprehensive approach in addressing the problems affecting rural health care. The Commission is pleased that the Secretary also acknowledges that "changes to the Medicare program alone would not be sufficient to assure essential access to rural health care."

Sole Community Hospitals

Sole community hospitals (SCHs), by reason of certain factors (including isolated location, weather conditions, or absence of other hospitals), provide the only source of inpatient services available within a reasonable geographic area. SCHs are paid a blended prospective payment rate of 75 percent of the hospital-specific amount plus 25 percent of the Federal regional rate. In addition, the Secretary is required to provide a payment adjustment to SCHs that experience a decrease in total discharges of 5 percent or more due to circumstances beyond their control. Hospitals that qualify as SCHs but have chosen not to seek designation are also eligible for this payment adjustment. Further, the hospital-

specific amount can be adjusted for SCHs that experience an increase in operating costs resulting from the addition of new inpatient facilities or services.

Over the past several years, the Commission has recommended that the Secretary evaluate the adequacy of SCH policies and is pleased that the Secretary is undertaking such a review. The Commission has been especially concerned about protecting Medicare beneficiaries' access to care in isolated rural areas and is, therefore, generally supportive of the Secretary's efforts regarding sole community hospitals.

Last year the Commission expressed concern over the stringency of the 75 percent market share test required for SCH designation. The Commission is pleased that the Secretary has eliminated this requirement for hospitals located more than 35 miles from a similar hospital. As it has recommended in the past, the Commission supports further evaluation and clarification of the criteria used for SCH designation.

The Commission also is pleased that the Secretary is simplifying the determination of the volume adjustment for SCHs. ProPAC believes, however, that the decision process should be expedited; the time period in which the fiscal intermediary must make its determination should be explicitly shortened by at least one-third from the current 180-day period.

Although the Secretary's final rule expands the number of rural hospitals eligible for SCH designation, the larger issue of adequate payment for these hospitals remains. Many hospitals that could qualify for SCH status do not seek designation because they receive higher PPS payments under the national rate. Nevertheless, many rural hospitals, including SCHs, are experiencing substantial losses under PPS. For this reason, ProPAC has called on the Secretary to initiate a comprehensive evaluation of the protection afforded isolated rural hospitals under current PPS policies.

Beneficiary Access to Care in Rural Areas

The Commission agrees with the Secretary that the rural health care system is in a period of profound change. In its March 1989 report, the Commission expressed its concern about the problems affecting rural hospitals and the rural health care system, as well as the implications of these problems for access to needed health care.

Since ProPAC's first report, the Commission has called on the Secretary to study and evaluate the effects of PPS on rural hospitals. The Commission is pleased that the Secretary plans to undertake additional evaluation of PPS payment policies for rural hospitals. The Commission plans to continue its own analysis of the effects of PPS on rural hospitals and on beneficiary access to care in rural areas. The Commission will share its findings with the Secretary.

Rural Referral Centers

Referral center designation is intended to identify rural hospitals that offer specialized staff and services and serve patients with special needs from a wide geographic area. Because of the services and the intensity of care provided, these hospitals have higher costs than other rural hospitals. Rural referral centers are paid the "other urban" standardized amount, adjusted by the applicable rural wage index.

A rural hospital qualifies automatically as a rural referral center (RRC) if it has 275 or more beds. A rural hospital with fewer than 275 beds may qualify as a RRC if it meets criteria on patient travel, patient services, and volume of referrals. A hospital with fewer than 275 beds may also qualify if it meets mandatory criteria regarding its case-mix index and total number of discharges, as well as one of three criteria on staff specialists, patient travel, or volume of referrals.

The Secretary is re-instituting a triennial review process to determine the continued qualification of hospitals that have been designated RRCs for three years or more. The Secretary proposed implementation of this review process beginning in FY 1987. However, the Congress extended RRC status for three additional years, beginning October 1, 1986, for hospitals classified as an RRC.

Estimates suggest that approximately one-quarter of the current RRCs will lose their designation following the review. Hospitals losing RRC designation will be paid at the rural rate rather than the "other urban" rate that they currently receive. As a result, payments to this group of hospitals will be reduced $20 million during FY 1990.

The Commission believes that the Secretary should reevaluate the thresholds enabling a rural hospital to qualify as a rural referral center. Although the criteria RRCs must meet are statutorily required, both the number of discharges and case-mix index should be evaluated for their appropriateness as criteria for designation. Furthermore, the Commission believes that changes in PPS policy should be implemented in a budget neutral fashion.

SECTION V.

RECALIBRATION OF DRG RELATIVE WEIGHTS

Recalibration is the process by which the DRG weights are adjusted to reflect changes in relative resource use among DRG categories. The recalibrated weights are then normalized or adjusted so that the average weight of all discharges is the same after recalibration as it was before.

There were two issues raised in the final rule regarding recalibration that are discussed in this section. One is the Secretary's use of charges as the basis for recalibrating the DRG relative weights. The other is the change in the procedure for normalizing the DRG weights that resulted in a 1.22 percent reduction in the weight for each DRG.

A. Method of Recalibration

The Commission previously recommended that the DRG weights be recalibrated using information on relative costs. While the Secretary considered this recommendation, the weights were recalibrated for FY 1990 based on charges. The Commission is disappointed that the Secretary did not use estimated costs in recalibrating the DRG weights. The weights are intended to reflect the average relative costliness of different types of cases. ProPAC continues to believe that weights based on estimated costs, which are derived by adjusting charge data for differences in hospitals' pricing practices, achieve this objective much better than weights based on unadjusted charge data. The resulting distribution of payments across DRGs and hospitals would more accurately reflect the costliness of different types of cases and provide incentives more consistent with the objectives of PPS. By utilizing charges, the current method is partly determined by hospital behavior that may represent business strategy and results in weights that could adversely affect various institutions.

Charge-based weights favor DRGs that include services that tend to have high markups (i.e., high charges relative to their costs). Since many of these high-markup services are not evenly distributed across hospitals, charge-based weights result in higher payment to hospitals that provide such services. Other things equal, charge-based weights thus favor hospitals that have generally high markups over those that do not, and may also encourage the use of high markup services over other, perhaps more appropriate, services.

Charge-based weights also result in higher weights for surgical DRGs and lower weights for medical DRGs than cost-based weights. They result in higher payments for urban hospitals and teaching hospitals than would be the case with cost-based weights. Thus, the distributional effects of cost-based weights seem to be more consistent with current directions in PPS payment policy.

Cost-based weights would not be as sensitive to hospital pricing practices as charge-based weights. They also would remove the effects of direct medical education and capital costs. These costs are recognized separately from the PPS payment rate but cannot be removed

from the charge data. Although the Commission recognizes the shortcomings of the current methodology for estimating case-level costs, we assert that the cost-based approach to the recalibration of the DRG weights is the preferred approach.

The Rand Corporation's study of alternative methodologies for recalibrating the DRG weights, referred to in both the proposed and final rule, provides no new evidence to counter ProPAC's position. In fact, the data presented in this study only reinforce many of the arguments presented in the Commission's March 1988 report.

The study concludes that "on theoretical grounds there is no reason to favor one set of weights over the other," and that "other criteria must be used to determine the desirability of the cost-based and charge-based methods, such as timeliness of the data and distributional implications across providers and patients."

As we have stated before, the Commission believes that the timeliness issue is less of a problem than is argued in the proposed rule. It is true that charge data are available for discharges during fiscal year 1988, the fifth year since PPS began, while the most recent reasonably complete cost data file applies to hospitals' fourth cost reporting period under PPS. This fact, however, overstates the differences in the timeliness of the two data sources.

Hospital cost reporting periods frequently overlap federal fiscal years; much of a given hospital's fourth year under PPS may occur during federal fiscal year 1988. For example, 40 to 50 percent of all discharges during federal fiscal year 1985--the second year of PPS--were from hospitals that were still in their first PPS cost reporting period. Thus, the latest available cost data actually overlap substantially with the latest available charge data.

Moreover, there is no reason to be restricted to the latest complete cost report file. If the fifth-year cost reports had not been delayed due to a substantial revision of the reporting form, many of the hospitals with cost reporting periods that begin on or soon after October 1 would have had their cost reports available in time to be used in recalibrating the weight for fiscal year 1990. These early fifth-year cost reports could be combined with the fourth-year data and supplemented with earlier data to construct a cost file that is fairly complete and matches very well with the fiscal year 1988 charge data.

Furthermore, even if the timing of the cost data did not match that of the charge data, it would not have an appreciable effect on the resulting weights. Although the components of estimated costs may change substantially for individual hospitals, there is no evidence that the overall pattern of estimated costs aggregated across DRGs would be substantially affected.

B. Adjustment of DRG Weights for Effects of Grouper Changes

The fiscal year 1990 proposed PPS rule included a 1.35 percent across-the-board reduction of the DRG relative weights. ProPAC estimated that this reduction would result in a decrease in PPS hospital payments of approximately $550 million. The reduction in the weights was justified by HCFA as a way to correct for the difference between the case-mix indexes resulting from the application of two different versions of the Grouper program to FY 1988 discharge data.

HCFA asserted that the difference in these case-mix indexes represents DRG weight inflation due solely to recalibration and changes in the Grouper, and not changes in case complexity. The reduction in the weights is to remove the effects of the previous inflation of the weights from the base used for future payment.

In ProPAC's comments on the proposed rule, the Commission stated that "the proposed adjustment of the DRG weights is inappropriate and ill-advised, because:

- It represents an administrative reduction in the overall level of DRG payments;
- It is inconsistent with prior methods in which increases in the case-mix index have been accounted for; and
- It adjusts for an increase in the case-mix index that may partly reflect changes for which hospitals should legitimately be compensated."

In the fiscal year 1990 final rule, the Secretary announced a 1.22 percent across-the-board reduction of the DRG weights. The change in the amount of the reduction is due to a slight change in HCFA's methodology. However, HCFA's argument for the reduction in the weights is the same as before.

The Commission continues to believe this adjustment is inappropriate. The following simple example portrays a situation similar to that described by HCFA in justifying the reduction of the DRG weights. It is completely hypothetical and not intended to represent any actual data on case mix change. However, it shows that differences in the case-mix index obtained from two different versions of the Grouper may indeed reflect real changes in patient resource requirements. These changes are rightly associated with higher payments to hospitals under PPS.

In this example there are five DRGs, each of which consists of three groups of cases (see Table 2). The cases in each of these within-DRG groups have different costs. However, the current Grouper (Grouper 1) does not distinguish between these within-DRG groups.

Table 2. DRGs and Within-DRG Groups Under Grouper 1 in Year 1

	Group 1		Group 2		Group 3		Total DRG	
DRG	# Cases	Cost	# Cases	Cost	# Cases	Cost	# Cases	Avg. Cost
001	55	$2000	50	$2100	45	$2200	150	$2093.33
002	35	$2500	33	$2600	32	$2700	100	$2597.00
003	33	$3000	34	$3100	33	$3200	100	$3100.00
004	29	$3500	33	$3600	38	$3700	100	$3609.00
005	25	$4000	35	$5000	90	$7000	150	$6033.33
TOTAL							600	$3582.67

In four of the five DRGs, the within-DRG groups differ very little from each other. The difference in cost between the least and most expensive case in each of these DRGs is only $200. In DRG 005, however, there is more variation among the within-DRG groups, with a spread of $3000 between the least and most expensive case.

A new Grouper (Grouper 2) is developed that better identifies the highest cost cases in DRG 005, and a new DRG (DRG 006) is created for those cases (see Table 3). Grouper 2 is calibrated on data from year 1. The resulting DRG weights are then normalized so that the case-mix index under each of the two Groupers for year 1 discharges is the same. Grouper 2 is then applied to discharges in the next year.

Table 3. Creation of New DRG Under GROUPER 2

	Group 1		Group 2		Group 3		Total DRG	
DRG	# Cases	Cost	# Cases	# Cost	# Cases	Cost	# Cases	Avg. Cost
GROUPER 1								
005	25	$4000	35	$5000	90	$7000	150	$6033.33
GROUPER 2								
005	25	$4000	35	$5000	15	$7000	75	$5066.67
006					75	$7000	75	$7000.00

Assume that, as was observed in the early years of PPS, the number of discharges falls, due to a shift of the least complex cases to other treatment settings (see Table 4). The difference between year 1 and year 2 involves no change in coding practices -- only a shift of patients from the inpatient hospital setting to other treatment settings. No matter which Grouper is used, this shift should result in a higher case-mix index and an increase in hospital payments per case, because the average hospital patient has greater resource

requirements than before. In this example, the average cost per discharge has increased by 3.7 percent (see Table 5).

Table 4. Change in Distribution of Cases Between Year 1 and Year 2

	Group 1		Group 2		Group 3		Total DRG	
DRG	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
001	55	35	50	40	45	45	150	120
002	35	22	33	26	32	32	100	80
003	33	22	34	28	33	33	100	83
004	29	18	33	27	38	38	100	83
005	25	14	35	30	15	15	75	59
006					75	75	75	75
TOTAL						600		500

As Table 5 shows, the case-mix indexes using both Grouper 1 and Grouper 2 have increased. However, the increase using Grouper 1 is only 1.4 percent, while the increase using Grouper 2 is 2.7 percent. This occurred because Grouper 1 captures only the effects of the shift in cases across the five original DRGs, while Grouper 2 captures some of the effects of the shift within those DRGs. The new Grouper -- as intended -- is more sensitive to differences in the mix of hospital cases.

Table 5.Changes in Cost per Case and Case-Mix Indexes Between Year 1 and Year 2

	Cost per Case	Case-Mix Index Grouper 1	Case-Mix Index Grouper 2
Year 1	$3,582.67	1.0134	1.0134
Year 2	3,714.40	1.0274	1.0408
Percent Change	+3.68%	+1.38%	+2.70%

This example shows that, even with no increase in coding, the application of two different Groupers to the same data can result in different case-mix indexes. Moreover, the higher of the two indexes can be perfectly justified and result in payments that are, if anything, more consistent with the principles of PPS. It would thus be inappropriate to reduce the DRG weights to account for this difference.

This example is not meant to represent any actual data on case mix change. It is not meant to imply that all -- or even most -- of the increase in the case-mix index under PPS reflects real increases in patient resource requirements. It is only meant to show that the difference in case-mix indexes obtained from two different versions of the Grouper may

reflect real increases in patient resource requirements, and are not necessarily due solely to coding changes.

Clearly, not all of the increase in the case-mix index between successive versions of the Grouper is due to real increases in patient resource requirements. In fact, the total case-mix index increase that is attributable solely to coding changes has been estimated to be far in excess of the 1.22 percent adjustment. Adjusting for the effect of changes in the Grouper is only a part of the larger issue of how to account for case-mix change under PPS. Each year, the Commission explicitly considers the effects of real changes in the case-mix index, upcoding, and changes in DRG case complexity in developing its recommendation on the update of the PPS rates. By incorporating case-mix change into its update recommendation, the Commission can account for the effects of both real changes and those due to upcoding, and adjust hospital payments appropriately.

The reduction of DRG weights, on the other hand, is neither a complete nor an accurate way to adjust for case-mix change. The Commission strongly objects to the additional reduction in PPS payments through the adjustment of the DRG weights.

SECTION VI.

INPATIENT CLASSIFICATION AND CASE MIX

Cases are classified into DRGs for payment under PPS based on principal diagnosis, up to four additional diagnoses, and procedures performed during the inpatient stay. Hospitals document this information using ICD-9-CM codes. When the hospital requests payment, the patient information is transmitted to the fiscal intermediary (FI). The FI enters this information into its claims systems and subjects it to a series of automated screens called the Medicare Code Editor (MCE). These screens are designed to identify cases that require further review before DRG classification can occur.

After screening through the MCE, cases are classified by the Grouper software program into the appropriate DRG. The Grouper program was developed as a means to classify cases into DRGs based on diagnosis, procedures codes, and demographic information.

There are 477 DRGs in 23 major diagnostic categories (MDCs). Most MDCs are based on a particular organ of the body; however, others may involve multiple organ systems. The principal diagnosis determines MDC assignment. Within most MDCs, cases are divided into surgical or medical DRGs. The medical DRGs generally are further divided on the presence or absence of complications or comorbidities (CCs).

The Commission is pleased with the improvements implemented by the Secretary to eliminate certain coding problems. In addition, the Commission is encouraged by the Secretary's efforts to group codes into DRGs on a more rational basis. However, there are several areas in which the Commission believes additional improvements could be made. This section highlights several of these issues.

A. Reassignment of Patients with Guillain-Barre Syndrome

Guillian-Barre syndrome (GBS) is a post-infectious polyneuropathy in which patients may require plasmapheresis or ventilation assistance, and long intensive care stays. GBS cases have been assigned to DRGs 18 and 19, (cranial and peripheral new disorders with and without a CC). The Commission believes that this assignment is inappropriate in terms of resource use. Therefore, the Commission recommended that the Secretary reassign patients with GBS to DRG 20 (nervous system infection except viral meningitis) or DRG 34 (other disorders of nervous system with CC), or create a new DRG.

The Secretary has chosen not to reclassify GBS patients in fiscal year 1990. However, the Secretary agrees that these patients consume more resources and has begun to study their cost.

ProPAC's analysis of FY 1987 data showed that average costs for these patients are substantially greater than for other patients in the same DRGs ($9,150 as compared to $3,400 in DRG 18 and $2,100 in DRG 19). ProPAC strongly believes that PPS must be sufficiently flexible to correct such payment inequities in a timely fashion.

Serious consideration should be given to ways of improving payments for these patients. Although the Yale DRG refinement may result in some improvements, it is unlikely that it will sufficiently correct current payment inequities. The Commission believes that the Secretary should reclassify these patients to a higher-weighted DRG.

B. Mechanical Ventilation - Diseases and Disorders of the Respiratory System (MDC 4)

Beginning in FY 1988, HCFA introduced DRG 474 (respiratory system diagnoses with tracheostomy) and DRG 475 (respiratory system diagnoses with ventilator support) to improve classification of mechanical ventilation cases in MDC 4. Analysis conducted by ProPAC showed that mechanical ventilation cases were extraordinarily more costly than other cases in each DRG within MDC 4. The Commission agreed with the Secretary's decision to create these new DRGs, and encouraged further analysis of mechanical ventilation cases outside of MDC 4.

Subsequently, hospitals have raised concerns regarding the assignment of MDC 4 cases to these DRGs: (1) the requirement of both ICD-9-CM procedure codes 93.92 (Other mechanical ventilation) and 96.04 (Insertion of endotracheal tube) for assignment to DRG 475, and (2) assignment of tracheostomy and mechanical ventilation cases to DRGs other than 474 and 475, respectively, by hospitals receiving such cases through transfer.

Starting October 1, 1988, ICD-9-CM procedure code 93.92 was redefined to include both mechanical ventilation and insertion of an endotracheal tube. The Secretary has proposed that mechanical ventilation cases need only have procedure code 93.92 to be assigned to DRG 475. The proposed change should alleviate problems of assigning patients to DRG 475 who have been intubated in one location (e.g., emergency room, ambulance) and admitted to another site. The Commission supports this decision.

The Secretary further proposed that cases in DRGs 474 and 475 that are transferred to another hospital should be assigned to DRG 475 by the receiving hospital. Under current DRG assignment rules, many of these cases would be assigned to another medical DRG (DRGs 78 - 102) in MDC 4. Based on analysis of the charges for tracheostomy and mechanical ventilation cases at transferring and receiving hospitals, the Commission supports this proposal by the Secretary.

The Commission continues to be concerned about costly tracheostomy and mechanical ventilation cases outside of MDC 4, and encourages the Secretary to continue studying more appropriate classification of these cases.

C. Acute Myocardial Infarction (AMI) -- New Codes

The Commission supported the Secretary's institution of new fifth-digit codes for cases of myocardial infarction (MI). These codes would identify non-acute MI cases currently assigned to DRGs 121 and 122 (circulatory disorders with AMI and cardio-vascular complications discharged alive with or without CC) and reassign them to a more appropriate DRG in terms of both clinical characteristics and resource use. This action would also result in more appropriate payment weights for acute MI cases assigned to these DRGs after recalibration takes effect.

The Commission is concerned, however, about short-term payment inequities that would persist in the interim period for cases remaining in these DRGs. The FY 1990 weights for DRGs 121 and 122 are based on all cases assigned to these DRGs, which includes both acute and non-acute MI cases. These non-acute cases have much lower resource use compared with acute cases. Including them in the calculation of the weights will result in lower payments for acute cases. The non-acute cases will likely receive more appropriate payments, since they will be reassigned to more appropriate DRGs. The cases remaining in these DRGs will be more clinically homogeneous and more costly. However, until recalibration for FY 1991, their payment weights will reflect a much less homogeneous set of cases.

Recent analysis reported in the medical literature has shown that as many as 67 percent of cases with AMI as a secondary diagnosis do not belong in the AMI DRGs based upon their clinical characteristics. Recent ProPAC analysis of these DRGs has demonstrated that cases with a secondary diagnosis of AMI are not only clinically different from those cases with AMI as a principal diagnosis but also substantially less costly. It therefore seems likely that these cases would be reassigned to other DRGs when the new AMI codes go into effect.

In order to assure appropriate payments for DRGs 121 and 122 for FY 1990, the Commission recommended either of the following courses of action. The first was to leave these cases in DRGs 121 and 122 through FY 1990 while assigning the new codes, and reassign them as part of recalibration for FY 1991. This would result in a more appropriate weight in FY 1991, and would pay hospitals in FY 1990 for the heterogeneous group of cases used in recalibrating the weight.

The second option was to use an alternative, temporary, FY 1990 weight for these DRGs, which would be approximately 1.7349 for DRG 121 and 1.1823 for DRG 122. These weights were estimated using all cases with a principal diagnosis of AMI, and the top 33 percent most costly cases with AMI as a secondary diagnosis. Based on analysis by ProPAC and others, these cases are the ones most likely to remain in DRGs 121 and 122 after the new AMI codes are implemented.

The Commission believes that these weights would more accurately reflect the cases that will be assigned to these DRGs in FY 1990. The Commission understands that recalibration for FY 1991 would reflect these changes, but believes that the large number of cases in

DRGs 121 and 122 warranted either leaving the newly coded cases in these DRGs through FY 1990, or using estimated weights on a temporary basis.

The Secretary rejected the Commission's suggestion regarding both options, on the basis of their being inconsistent with the general policy on reclassification and recalibration. When they are unable to determine how cases will be coded under revised definitions, the policy has been to leave the cases in their current DRG assignment for recalibration purposes. The Secretary feels that there is no way to accurately predict which cases will no longer be assigned to DRGs 121 and 122 in FY 1990, and thus there is no basis for determining an appropriate adjustment to weights for DRGs 121 and 122.

D. Electrophysiologic Studies

The American College of Cardiology, along with a number of cardiologists and electrophysiologists, objected to the treatment of procedure code 37.26 (cardiac electrophysiologic stimulation and recording studies) as a non-operating room procedure code with no effect on DRG assignment. Many of the commenters felt that electrophysiologic studies (EPS) should be treated as either a cardiac catheterization or an OR procedure for the purpose of DRG assignment.

Based on data for a portion of FY 1989, the Secretary believes that EPS is comparable to cardiac catheterization in terms of resource use and time required. Therefore, procedure code 37.26 has been added to the list of non-OR procedures in DRGs 104, 106, 108 and 112.[2] ProPAC agrees with this change, and feels that it more accurately reflects resource use involved in cases of this type.

E. Implantable Defibrillators

The manufacturer of the automatic implantable cardiac defibrillator (AICD) made three recommendations: (1) cases in which a patient undergoes both AICD implantation and electrophysiologic (EP) testing during the same hospitalization should be classified into DRG 104 (cardiac valve procedures with pump and cardiac catheterization); (2) when a total AICD system is implanted in two stages on different days during the same hospitalization, the case should be assigned to DRG 104; and (3) AICD replacement cases should be moved from DRG 120 (other circulatory system or procedures) and be reassigned to DRG 109 (other cardiothoracic procedures without pump).

The Secretary agreed with the first two recommendations based upon the fact that these cases are the same as any other AICD implantation case, which would be assigned to DRG 104 or 105. ProPAC agrees with this decision. The Secretary felt that based upon the most recent available data, placement in DRG 120 is appropriate for cases of AICD

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[2] DRG 104 (cardiac valve procedure with pump and with cardiac cath.), DRG 106 (coronary bypass with cardiac cath), DRG 108 (other cardiothoracic or vascular procedures with pump), and DRG 112 (vascular procedure except major reconstruction with out pump).

replacement. These cases will not be reassigned to DRG 109. This is supported by ProPAC's preliminary data as well.

F. Percutaneous Transluminal Coronary Angioplasty

A problem was noted in the assignment of percutaneous transluminal coronary angioplasty (PTCA) cases during analysis of grouper logic for DRGs 106, 107 and 108. Although PTCA is similar to cardiac catherization in terms of time and resource use, it was not listed as a cardiac catherization in DRG 106 (coronary artery bypass surgery with cath). Therefore, if a patient had PTCA and then went on to have bypass surgery, that case would be assigned to DRG 107 (coronary bypass without cath), which has a lower weight.

The Secretary has modified the Grouper definitions in DRG 106, and PTCA will now be assigned as a cardiac catheterization. ProPAC agrees with this modification.

G. Cochlear Implants

In its April 1986 Report to the Secretary, the Commission recommended the creation of a temporary device-specific DRG for cochlear implant cases. This recommendation was based on industry data that showed significantly higher costs for these cases, due in large part to high device costs. Rather than a new DRG for these cases, the Secretary created specific ICD-9-CM codes for cochlear implants, effective October 1, 1986, to permit evaluation of these cases in future MedPAR files.

Analysis conducted by the Secretary using 1987 MedPAR data showed mean standardized charges for cochlear implant cases to be lower than the mean standardized charges for all other procedures in DRG 49 (major head and neck procedure). Similar results were found when analyzing cases in the 1988 MedPAR file. These results are troubling, in light of analyses reported by others that show significantly higher charges for these cases when compared to other cases in DRG 49.

Analysis conducted by ProPAC using 1987 MedPAR data likewise found that average costs for cochlear implant cases were lower than the costs for all other cases in DRG 49. Industry representatives, however, have reported significant coding inaccuracies for cochlear implant cases by hospitals, which probably has affected the results reported both by ProPAC and the Secretary. The Commission supports the Secretary's actions to encourage accurate coding of cochlear implant cases, and will continue to monitor the appropriateness of assigning cochlear implant cases to DRG 49.

H. Limb Salvage

The Commission and the Secretary have been working closely with experts in the field of vascular surgery to attempt to identify a subset of resource intensive cases in DRG 110 (major reconstructive vascular procedure without pump with CC). Data collected by the vascular surgeons indicated that there was a group of patients with gangrene, necrosis or non-healing ulcer in DRG 110. These patients had long stays and required more intensive

services due to their delayed healing. Additional data provided by a hospital treating a high proportion of diabetics also demonstrated that this subset of patients was more severely ill.

The Commission agreed with the Secretary that creating expensive and inexpensive subcategories of cases exhibiting similar ICD-9-CM coding is contrary to the basic premises of prospective payment. The Commission is concerned that lack of adequate reimbursement for these cases could limit provision of limb salvage and create incentives to perform amputation. One commenter recommended that cases in DRG 110 be differentiated based on whether there is a gangrenous lesion that could lead to amputation of a limb. The Secretary will continue to analyze the cases in DRG 110 with attention to the classification change suggested by this commenter.

I. Refinement of Complications and Comorbidities List

As noted above, medical DRGs are divided based on the presence or absence of a complication or comorbidity. The Secretary eliminated a number of minor cardiac blocks and dysrhythmias from the CC list. ProPAC's preliminary analysis indicated that these diagnoses were not associated with higher costs or longer lengths of stay. A number of comments were received suggesting that three cardiac block codes that the Secretary proposed to eliminate could in fact be significant in a patient with an acute myocardial infarction. In the final rule, these three codes were retained on the CC list, and the remainder were eliminated.

The Secretary implemented a limited revision of the CC exclusions list, which would correct errors in the list and add or delete a number of CCs. A number of four-digit codes were deleted and replaced with more specific five-digit codes. The Commission supported the Secretary's refinement and revision of the CC list.

J. DRG Refinements

In recent years, HCFA has funded a number of research projects aimed at improving the measurement of hospital inpatient case-mix and severity of illness. One such project, recently completed at Yale University, involves the development of a major revision of the DRG patient classification system.

The Commission recommended that the Secretary begin immediately to thoroughly evaluate the potential consequences of adopting the DRG refinements developed at Yale University. Preliminary results indicate that these refinements substantially improve the ability of the DRGs to distinguish patients who are expected to have relatively high or low resource needs from other patients.

The Secretary agrees that a full assessment of the DRG refinements is necessary. The Commission will work with the Secretary in this effort.

SECTION VII.

IMPROVING THE COST DATA USED FOR DECISION MAKING

The original purposes of the Medicare Cost Report (MCR) were to determine reasonable costs, as defined by Medicare, and to calculate Medicare's share of these costs. Under PPS, the MCR continues to be used for reimbursement of selected costs, but it also provides the only information available on hospital costs of treating Medicare beneficiaries, based on Medicare definitions.

The Commission recommended that the Secretary initiate the developmental work necessary to secure the future role of the MCR as a vital information source for payment policy evaluation and decision making. Efforts to improve the cost report should also minimize the administrative burden on hospitals, fiscal intermediaries, and HCFA.

The Secretary responded by noting that HCFA is conducting a demonstration project to test expanded data collection through the MCR. In addition to adding financial and statistical data for payers other than Medicare, the demonstration will also attempt to improve the timeliness and uniformity of cost report data through electronic submission. The Commission heartily endorses this project, and we anticipate assessing the results of the demonstration for national applicability.

However, ProPAC believes that the goals of the demonstration project do not encompass a broad examination of the current cost report. This examination must begin with determining the data needed to support future decision making, and then reconcile these needs with the desire for data consistency, accuracy and timeliness, as well as reduced reporting burden.

Recognizing the need to improve the use of MCR data, ProPAC has initiated two studies to assess the accuracy of cost report data. The first will examine the difference between costs as currently measured on the cost report and cost calculations reflecting: (1) changes in cost reporting methodology, (2) changes in Medicare allowable cost policy, and (3) use of data from more advanced hospital cost accounting systems. The second study will compare total margins derived from MCR data to similar data reported to the American Hospital Association, with a detailed examination of any discrepancies that are documented. The Commission looks forward to working with HCFA in reviewing the policy implications of these study results, as well as the results of any additional cost reporting development work that HCFA may undertake.

SECTION VIII.

AMBULATORY SURGERY PAYMENT

The Commission's report contains two recommendations regarding ambulatory surgery payment.[3] The first relates to Medicare payment for hospital outpatient (OPD) surgery. The second relates to beneficiary liability for OPD surgery. The Commission is disappointed that the Secretary failed to support either recommendation, particularly implementation of a prospective system for OPD surgery.

A. Medicare Payment for Hospital Outpatient Surgery

The Commission recommended, as an interim measure, that payment for certain ambulatory surgeries in the OPD be entirely prospective. The Secretary did not agree with this interim approach. The Secretary's disagreement is based on two stated principles -- first, that Medicare outlays should be no greater under the proposed system than under current law; and second, that payment differences between OPDs and freestanding ambulatory surgery centers (ASCs) should be based on justifiable cost differences.

The Commission agrees with these basic principles and believes that its recommended approach is consistent with the Secretary's goals. In its recommendation, ProPAC stipulated that the payment rates for FY 1990 should be set so that combined Medicare and beneficiary payments to hospitals would be the same as under current policy. The Commission believes that its approach will continue to maintain financial pressure on hospitals to reduce ambulatory surgery costs.

In addition, the Commission agrees with the Secretary that the system should recognize justifiable differences in costs of furnishing services in OPDs and ASCs. In fact, ProPAC analysis indicates that, in general, OPD costs per case for surgery exceed both the ASC payment rates and the 50/50 blended payment rate. Mean ASC payment rates per case are, on average, 38 percent less than mean OPD costs per case; the 50/50 blended payment is 19 percent less than mean OPD costs per case.

Many factors potentially contribute to the higher costs of OPDs versus ASCs. Among them are patient severity, efficiency, maintaining standby capacity, overhead allocation methods, uncompensated care, capacity utilization, teaching activity, billing and coding practices, bundling of services, and regulatory requirements. The effect of these factors on the costs of care is not well understood.

Furthermore, the Commission is concerned about the accuracy of the ASC payment rates. In establishing the rates, HCFA faced severe data constraints. Data were unavailable for many procedure codes that were recently added to the ASC list of procedures. Further,

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[3] Additional information is contained in *Medicare Payment for Hospital Outpatient Surgery: the Views of the Prospective Payment Assessment Commission*, April 1989.

data obtained from a survey of ASCs was limited due to underreporting and commingling of financial information from physician private practices with information from ASCs in many cases. Some individuals assert that HCFA's methodology resulted in ASC payment rates that are understated. In light of these limitations, the Commission has recommended that the Secretary investigate ways of improving data from ASCs.

For these reasons, the Commission believes its approach based on blended amounts is fair and reasonable. Until the reasons for cost differences between hospitals and freestanding ASCs can be better understood, the Commission believes that the freestanding rates should be given less prominence in establishing OPD payments.

Beyond the recommended technical modifications, ProPAC's approach calls for a fundamental change in Medicare payment for hospital outpatient surgery -- an entirely prospective amount, including capital. We believe that such a change is essential for achieving many of the system goals that ProPAC, the Secretary, and the Congress share. Fully prospective payments give hospitals an opportunity to earn a profit or risk a loss, thereby rewarding increased efficiency. Further, policy based on prospective rates allows for controlling the growth of payments through an annual updating process.

B. Beneficiary Liability for Hospital Outpatient Surgery

The Commission further recommended that the method for calculating Part B coinsurance for OPD surgery be modified. The Commission believes the current policy, which computes coinsurance on the basis of submitted charges, unfairly penalizes the beneficiary. The Secretary stated that because he is not adopting the proposed payment changes, this recommendation cannot be implemented. Since payments are not known in advance, it is administratively infeasible to ensure that beneficiary coinsurance is limited to 20 percent of the Medicare allowed payment amount. In addition, this recommendation would increase Medicare expenditures.

The Commission realizes that Medicare expenditures could increase under this recommendation. However, ProPAC believes that the Medicare program should assume responsibility for 80 percent of the payment amount. The Secretary could modify this recommendation in a manner that would better protect beneficiaries while constraining increased expenditures.

SECTION IX.

EVALUATION OF PRO REVIEW AND QUALITY OF CARE

The Commission recommended that a thorough examination of the impact of PROs on quality of care for Medicare beneficiaries be undertaken. The Secretary indicates that HCFA has several evaluation processes in place for assessing the effectiveness of PROs. The Secretary cites especially the SuperPRO and the Peer Review Organization Monitoring Protocol and Tracking System (PROMPTS). He also describes developmental work underway for extension of PRO review into episodes of care and other areas. While some of these activities address part of the Commission's concerns, the major, independent evaluation that ProPAC has recommended for three years is not addressed. It will not be undertaken, presumably because the Secretary believes these other activities are sufficient.

The Commission does not believe these activities are an adequate substitute for a major evaluation of the PRO program. More information is needed in several areas. For example, evidence suggests that some quality problems are not being identified by the PRO screens. This deserves further study, so that the review process can be modified as necessary. We also need more information on how the screens can be operationalized so that they are more efficient and their results more reliable.

The Commission supports efforts underway to develop a means of monitoring outcomes and of refining current PRO review activities. However, given that this work is still in an early phase of development, ProPAC believes HCFA also needs to continue to study ways of modifying and improving its current review activities.

REPORT APPENDIXES

APPENDIX A

SUMMARY OF THE FINAL PPS RULE

This appendix summarizes the major provisions contained in the final rule on changes to the inpatient hospital prospective payment system for fiscal year 1990 issued September 1, 1989.[1]

I. UPDATE FACTORS FOR RATES OF PAYMENTS FOR INPATIENT HOSPITAL SERVICES

A. Update Factor for PPS and PPS-excluded Hospitals

As required by statute, the regulation contains an update in the prospective payment rates and target ceiling rates that is equal to the increase in the market basket, 5.5 percent. The effect of this update combined with other changes (including the 1.22 reduction in DRG weights and the new wage index) would have a differential impact on hospitals according to geographic location. In general, the net effect of changes in PPS policy would be to increase payments to hospitals in rural areas by 3.5 percent, in large urban areas by 3.6 percent, and in other urban areas by 3.9 percent.[2]

B. Secretary's Final Recommendation

While the update factor is legislated, the Secretary is required to publish his recommendation. The Secretary recommends an update that is consistent with the Administration's budget proposal, that is an average of the market basket increase minus 1.5 percentage points. The Secretary believes an update higher than prior years is appropriate in order to ensure high quality of care. However, an update lower than the market basket is necessary to encourage cost efficiency.

The Secretary recommends differential updates for PPS hospitals. The Secretary believes a higher update for hospitals located in rural areas and in large urban areas is warranted.

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[1] Medicare Program; Changes to the Inpatient Hospital Prospective Payment System and Fiscal Year 1990 Rates; Final Rule, Department of Health and Human Services, Health Care Financing Administration, (54 Federal Register 169, 36452) September 1, 1989.

[2] Because the current estimate of FY 1989 outlier payments is 5.7 percent of total PPS payments, rather than the 5.1 percent as anticipated for both FY 1989 and FY 1990, the impact analysis reflects a change that is 0.6 percent smaller than the actual effect of changes in policy.

However, the Secretary does not specify what the updates for these areas should be. In addition, the Secretary recommends an update in the TEFRA target rate greater than market basket minus 1.5 percent.

The Secretary considered the following factors in arriving at his update recommendation:

- o Decline in operating margins -- For FY 1987, large urban hospitals had margins of 5.8 percent, other urban hospitals had margins of 6.8 percent, and rural hospital margins were -0.2 percent.

- o Productivity adjustment -- An adjustment of -1.0 percent should be used to encourage productivity gains.

- o New technologies -- A small adjustment for new technologies.

- o Practice patterns -- An adjustment of as much as -0.84 percent for cumulative changes in practice patterns would be appropriate.

- o Outcome measures -- A (subjective) adjustment that considers indicators such as preventable deaths, premature discharges, and substandard regimens of care.

II. CHANGES TO DRG CLASSIFICATIONS AND WEIGHTING FACTORS

A. Recalibration of DRG Weights

1. Method

The Secretary continued to use charges as the basis for recalibrating DRG relative weights. Consistent with past practices, the FY 1990 weights were normalized by an adjustment factor so that the average GROUPER 7 case weight after recalibration was equal to the average GROUPER 6 case weight for the same discharges.

2. Reduction in DRG Weights

The Secretary reduced the average GROUPER 6 case weight by 1.22 percent before recalibrating. This reduction adjusts for increases in the Medicare case-mix index that are asserted to be due solely to changes in the GROUPER between FY 1986 and FY 1988.

Several changes were made in GROUPER 4 (FY 1987) and GROUPER 5 (FY 1988), that increased the potential for upcoding. For instance, GROUPER 4 implemented a new DRG for extensive burns with an operating room procedure, and GROUPER 5 implemented two new DRGs for tracheostomy and mechanical ventilator cases, and eliminated age over 69 as a criterion for DRG assignment.

The Secretary processed FY 1987 MedPAR data through GROUPER 3. These cases were paid using GROUPER 4. The difference between the actual FY 1987 case-mix index value (paid using GROUPER 4) and the one using GROUPER 3, 0.29 percent, was attributed solely to GROUPER changes. Similarly, the FY 1988 data was processed using GROUPER 4 and the case-mix index value was 0.93 percent higher than the actual case-mix value using GROUPER 5 (the version used for payment). The total case-mix difference resulting from GROUPER changes was 1.22 percent.

Therefore, in the Secretary's judgment, of the total increase in the case-mix index value from FY 1986 to FY 1988 (6.4 percent), 1.22 percent was the result solely of recalibration and changes made to the GROUPER program, and this effect was removed from the relative weights.

B. Reclassification of DRGs

1. MDC 4: Diseases and Disorders of the Respiratory System

The Secretary revised DRG 475 (respiratory system diagnosis with ventilator support) by eliminating the requirement of coding the insertion of an endotracheal tube. This allows assignment to DRG 475 when a ventilator patient with a principal diagnosis in MDC 4 is intubated in another setting and then admitted for inpatient treatment. The Secretary further revised rules to DRG 475 by now allowing all transfer cases from DRG 474 and 475 to be assigned to DRG 475 at the receiving hospital.

The Secretary plans to study the effect of the Yale DRG Refinement Project on classification of patients with ventilator support that do not have a respiratory system principal diagnosis.

2. Surgical Hierarchies

The Secretary revised the surgical hierarchy for MDC 5 (diseases and disorders of the circulatory system) and MDC 8 (diseases and disorders of the musculoskeletal system and connective tissue).

3. Refinement of Complications and Comorbidities List

The Secretary eliminated several minor cardiac block and dysrhythmia diagnoses from the CC list; revised the exclusion lists; and added a number of CCs to the list.

4. Review of Procedure Codes in DRGs 468 and 477

The Secretary implemented two DRG classification changes to reduce assignment of cases to DRG 477 (non-extensive OR procedure unrelated to principal diagnosis). The revisions involved procedure codes relating to other dilation and curettage and aspiration curettage following delivery or abortion. In addition, changes were

implemented to reduce inappropriate assignments to DRG 233 and 234 (other musculoskeletal system and connective tissues OR procedures.)

5. Additional Classification and Coding Improvements

The Secretary implemented a fifth digit to the ICD-9-CM codes to indicate whether or not intractable epilepsy is involved. A new fifth digit was also implemented in the category for acute myocardial infarction; it distinguishes an initial episode of care from a subsequent episode of care. Several changes were implemented regarding DRG assignment of procedure code 37.26 (electrophysi-ological or EP studies). In general, these changes would recognize the comparability of EP studies to cardiac catherization procedures in terms of resource use and time required. In addition, percutaneous transluminal coronary anigoplasty (PTCA) will be assigned as a cardiac catherization procedure to DRG 106, cardiac catherization procedures. Finally, several changes were implemented regarding the assignment of cases involving automatic implanted cardioverter defibrillator.

6. Other Issues

The Secretary decided not to create a new DRG for cochlear implants. In addition, the Secretary was unable to determine if problems associated with limb salvage could be solved through GROUPER logic changes. Further, the Secretary was unable to evaluate the appropriateness of classification changes for patients with Guillian-Barre syndrome. As a result, no changes in these areas were implemented.

III. CHANGES TO THE HOSPITAL WAGE INDEX

A. Update the Wage Index Data

The Secretary based the wage index solely on 1984 wage data. The Secretary stated that this change will not significantly impact aggregate prospective payments.

B. Revisions to Wage Index for Rural Counties Whose Hospitals are Deemed Urban

As required by the Technical and Miscellaneous Revenue Act of 1988 (Public Law 100-647) for discharges occurring on or after October 1, 1989 and before October 1, 1991, the Secretary calculated the wage index for FY 1990 as follows:

- MSAs whose wage index values were reduced because of the inclusion of wage data from adjacent rural hospitals deemed to be urban will have wage indexes calculated excluding the rural hospitals.

- Wage index values will be calculated on a county-specific basis for those counties with rural hospitals deemed to be urban.

- Rural areas whose wage index values were reduced by excluding rural hospitals deemed urban will be recalculated to include such hospitals. Rural areas whose wage index values increased by excluding such hospitals will retain the higher wage index values.

C. Future Updates to the Hospital Wage Index

The Secretary has developed two survey forms to collect data for the FY 1991 update of the wage index as required by OBRA 1987. However, before implementing this updated wage index or deciding about the future collection of data by occupational categories and incorporating future wage survey forms into the hospital cost report, the Secretary solicited comments on issues including,

- Should the wage index include data on contracted labor?
- Which fringe benefits should be included in the wage index, and how should they be valued?
- If occupational data were collected, what formula or methodology should be used in calculating an occupational-mix index?
- Should the survey form be incorporated into the hospital cost report?

IV. OTHER DECISIONS AND CHANGES

A. Burn Outlier Cases

The Secretary will pay burn outlier cases at a 90 percent marginal cost factor for cost outliers, and 60 percent marginal cost factor for day outliers. Dual outliers will be paid using the method that provides the greatest payment.

B. Payments to Sole Community Hospitals

The Secretary will allow a hospital that cancels its SCH status to requalify as a SCH after one full year passes since cancellation was effective, provided they meet the criteria for qualification.

The Secretary extended indefinitely the provision that allows SCHs to receive a payment adjustment when it experiences a significant increase in operating costs resulting from new inpatient services or facilities.

The fiscal intermediaries (FIs) will determine payment adjustment for SCHs experiencing significant volume decreases. Hospitals can appeal the FI's determination.

Further, the Secretary eliminated the market share test for hospitals located more than 35 miles from a like hospital.

C. Cancer Hospitals

The Secretary clarified that cancer hospitals receiving payments on a reasonable cost basis retain their status as subsection (d) hospitals. This clarification, in general, eliminated PIP status for cancer hospitals and subjected cancer hospitals to the capital payment reductions.

D. Rural Referral Centers

A rural hospital must meet several criteria to qualify as a referral center. One of the criteria is that the hospital have 275 or more beds available for use. If the hospital does not meet the bed size criterion it can qualify by meeting two mandatory criteria (number of discharges and case-mix index) and at least one of three optional criteria (medical staff, source of inpatients, or volume of referrals).

1. Updating of Criteria

For cost reporting periods beginning on or after October 1, 1989, to qualify as a referral center a hospital's case-mix index value for FY 1988 would have to be at least (a) 1.2187 or (b) equal to the median case-mix value for urban hospitals (excluding those with approved teaching programs) located in the same census region. In addition, the hospital's number of discharges in FY 1988 must also be at least (a) 5,000 or (b) equal to the median number of discharges for urban hospitals located in the same census region.

2. Retention of Referral Center Status

OBRA 1986 provided that any hospital classified as a referral center on the date of enactment of that law will continue to be so classified for cost reporting periods beginning on or after October 1, 1986 and before October 1, 1989. With the expiration of this legislation, the Secretary implemented the following retention policy. To retain status as a referral center, a hospital must meet the criteria for classification for at least 2 of the 3 years after it qualifies or must qualify on the basis of the requirements for the current year.

E. Outlier Payment

The Secretary set the outlier thresholds so that estimated outlier payments equal 5.1 percent of total PPS payments. The thresholds for FY 1990 for day outlier cases will be the geometric mean length of stay plus the lesser of 28 days or 3 standard deviations, and for cost outlier cases it will be the greater of 2.0 times the DRG's prospective payment rate or $34,000.

Under these thresholds, approximately 34 percent of all cases receiving outlier payments will be paid using the cost outlier methodology and 66 percent using the day outlier

methodology. About 46 percent of total outlier payments will be spent for cases which qualify as day outliers, and 54 percent for cost outlier cases.

F. Other Areas

The Secretary made several conforming amendments required by law.

V. OTHER PROPAC RECOMMENDATIONS

A. Indirect Medical Education Adjustment (Rec. 8)

The Secretary agreed that the indirect medical eduction adjustment should be reduced. However, the Secretary believes it should be reduced to 4.05 immediately. In addition, the Secretary believes payments to other hospitals are adequate; therefore, the reduction should not be implemented in a budget neutral manner.

B. Outlier Payment Policy (Rec. 9)

The Secretary agreed to continue examination of outlier payment policy. In particular, the Secretary is interested in developing policies to protect small rural hospitals from financial hardship due to costly cases. In addition, the Secretary believes that the PROs should conduct an assessment of whether patients are denied access to health care services.

C. Updating the Area Wage Index (Rec. 10)

The Secretary shares ProPAC's concern. A survey has been distributed to collect 1988 wage data from all PPS hospitals. Due to time constraints, the new wage index will not be developed earlier than March 1990.

D. Improving the Cost Data for Decision Making (Rec. 11)

The Secretary believes the demonstration project and electronic cost report format will result in more timely and uniform data.

E. Improvements in Case-Mix Measurement (Rec. 12)

The Secretary agreed that a full assessment of the Yale refinement DRG study is necessary and will be pleased to work with ProPAC in this regard. The Secretary does not plan to implement the Yale model in 1991. However, he will evaluate whether certain aspects of the model could be implemented separately.

F. Evaluation of PRO Review and Quality of Care (Rec. 14)

The Secretary agreed that the impact of PROs on quality of care needs evaluating. The Secretary also agreed that more sophisticated methods of inpatient and outpatient quality review should be developed, tested, and implemented.

The Secretary described current review mechanisms. One involves the SuperPRO, which validates PRO's determinations. The SuperPRO identifies quality issues that should have been addressed by the PRO using the generic screening criteria. The SuperPRO findings, including those related to generic quality screens, will be considered in the PRO evaluation process. The second method involves the PRO Monitoring Protocol and Tracking System (PROMPTS). PROMPTS monitors PROs performance in the area of quality of care, also. PROMPTS includes regional office review of PRO clinical decisions, including generic screen failures. In addition, the Secretary is developing methodologies for PROs' to use when proposing pilot projects to improve quality measures in both the inpatient and outpatient setting.

In addition, the Secretary has begun a project that collects abstracted clinical data to detect problems in the medical treatment of beneficiaries. To establish a baseline measure of health and functional status, the Secretary is considering establishing a registry that will contain assessments of the condition of Medicare beneficiaries at the time of entry into the health system and at appropriate intervals thereafter. Finally, the Secretary is about to begin a demonstration to review services furnished by physicians in various settings.

G. Rural Hospitals (Rec. 15)

The Secretary believes that administrative and legislative changes have improved payment equity for rural hospitals. However, changes in PPS cannot address the fundamental problems facing rural hospitals that arise from changing economic circumstances. The Secretary is placing priority on research related to rural hospitals.

H. Medicare Payment for Hospital Outpatient Surgery (Rec. 16)

While the Secretary agreed with the objective to develop a PPS for hospital outpatient surgery, he disagreed with ProPAC's approach. The Secretary believes that the system should: (1) ensure that Medicare expenditures are no greater than current law, and (2) create a level playing field between ASCs and OPDs where only justifiable differences in costs should be recognized. Therefore, the Secretary believes no changes should be instituted at this time.

In addition, the Secretary believes that changes to the current system on a temporary basis would be disruptive to the industry and strain current spending. Instead, the Secretary is developing a fully prospective payment system for all OPD services as required by Statute.

I. Beneficiary Liability for Hospital Outpatient Surgery (Rec. 17)

Since the Secretary is not adopting a PPS system for OPD surgery, this recommendation cannot be implemented.

APPENDIX B

SUMMARY OF COMMISSION'S 1989 RECOMMENDATION AND SECRETARY'S RESPONSE

This section summarizes ProPAC's recommendations to the Secretary for fiscal year 1990 and the Secretary's response. It is arranged in two parts. The first part, based on Commission recommendations, is organized as follows:

- First the Commission's recommendation, as stated in its March 1989 Report, is provided.
- The Secretary's response to the recommendation is summarized. This response was contained in the proposed rule issued May 8, 1989, by the Department of Health and Human Services, Health Care Financing Administration, (54 Federal Register 87, 19636).
- The Commission's comment on the NPRM, as transmitted to the Secretary of HHS July 7, 1989, is summarized.
- Finally, the Secretary's final action, as contained in the final PPS rule, is provided. The final rule was issued September 1, 1989 (54 Federal Register 169, 36452)

In some cases, the Commission's comment follows more than one recommendation.

The second part, based on the Secretary's actions, is organized as follows:

- First, changes initiated by the Secretary in the notice of proposed rule-making (NPRM) are summarized.
- Then, the Commission's comment on these changes is summarized.
- Finally, the Secretary's final action is desribed.

PART I -- COMMISSION RECOMMENDATIONS

UPDATING PPS PAYMENTS AND RATE OF INCREASE

ProPAC Recommendation 1: Amount of the Update Factor for PPS Hospitals

For fiscal year 1990, the standardized amounts should be updated by the following factors:

- The projected increase in the modified PPS market basket as recommended by ProPAC, currently estimated at 5.8 percent;

- A positive adjustment, currently estimated at 0.6 percent, to correct for errors in the fiscal year 1989 market basket forecast;

- A discretionary adjustment factor of 0.0 percentage points;

- A net -0.7 percent adjustment for case-mix change;

- A -0.8 percent adjustment for urban hospitals to reflect first-year PPS cost information;

- A differential update for urban hospitals in MSAs with more than 1 million people, accomplished by a +0.2 percent adjustment for these hospitals and a -0.3 percent adjustment for other urban hospitals.

Secretary's Response

The regulation reports the statutory update as being equal to the increase in the market basket, currently estimated at 5.8 percent. The projected effects of this increase, combined with other proposed changes (including a 1.35 reduction in DRG weights, the wage index, as well as a reduction in outlier payments), are reported in the NPRM. The proposed FY 1990 rates would have a differential impact on hospitals according to geographic location. In general, the net effect of these changes would be to increase payments to hospitals in rural areas by 3.9 percent, in large urban areas by 3.9 percent, and in other urban areas by 4.2 percent.

However, the Secretary proposes an update that is consistent with the Administration's budget proposal; that is, an average of the market basket increase minus 1.5 percentage points. The Secretary believes an update higher than prior years is appropriate in order to ensure a high quality of care. However, an update lower than the market basket is necessary to encourage cost efficiency.

The Secretary recommends a higher update for hospitals located in rural areas and in large urban areas. The Secretary does not specify what the updates for these areas should be.

ProPAC's Comment

The Commission believes that the update recommended by the Secretary, in combination with the recommendation that the DRG relative weights be adjusted for the effect of changes in the GROUPER program, will result in PPS rates that are insufficient to maintain a proper level of payment for hospitals under PPS. In addition, the lack of a well-defined framework describing the components of the Secretary's update recommendation makes it difficult to assess the reasoning behind it.

The average update recommended by the Secretary is lower than that recommended by ProPAC. Moreover, the Secretary's proposal to adjust the DRG relative weights for the effect of changes in the GROUPER program on the case-mix index (see below) amounts to a further administrative reduction in PPS rates of 1.35 percent. The total effect of the Secretary's proposal, then, is to update the PPS rates by the forecasted increase in the market basket minus 2.85 percent--almost two percentage points lower than the Commission's recommendation.

In addition, the lack of a well-defined framework to describe how the Secretary's update recommendation was formulated makes it difficult to properly assess the reasoning behind it. Without this type of framework, the recommendation could be interpreted as arbitrary and driven solely by budgetary considerations.

Final Action

As required by statute, the regulation contains an update in the prospective payment rates and target ceiling rates equal to the increase in the market basket, 5.5 percent.

The Secretary did not change his update recommendation averaging market basket minus 1.5 percent. The Secretary states that the following factors were considered:

- Decline in operating margins -- For FY 1987, large urban hospitals had margins of 5.8 percent, other urban hospitals had margins of 6.8 percent, and rural hospital margins were -0.2 percent.

- Productivity adjustment -- An adjustment of -1.0 percent should be used to encourage productivity gains.

- New technologies -- A small adjustment for new technologies.

- Practice patterns -- An adjustment of as much as -0.84 percent for cumulative changes in practice patterns would be appropriate.

- Outcome measures -- A (subjective) adjustment that considers indicators such as preventable deaths, premature discharges, and substandard regimens of care.

ProPAC Recommendation 2: Market Basket Structure

The Commission believes the hospital industry wage portion of the market basket should be increased to better reflect changes in hospital and other labor markets. The wage and benefit component of the market basket should be measured using 50 percent Employment Cost Index compensation series for hospital workers and 50 percent non-hospital ECI compensation series reflecting the types of employees hospitals hire. The Commission also encourages the development of an ECI compensation series specific to hospital professional and technical workers.

Secretary's Response

The Secretary intends to study this recommendation regarding the labor inputs used to construct the hospital market basket.

ProPAC's Comment

The Commission is pleased that the Secretary will, as part of the next periodic rebasing of the market basket, re-examine the role of hospital input prices. The current market basket gives inadequate recognition to the unique characteristics of the hospital labor market. Giving equal weight to hospital and non-hospital wage measures would more appropriately reflect changes in the markets in which hospitals must establish their wage and benefit levels. The Commission, therefore, strongly encourages the Secretary to adopt its recommendation on revising the market basket structure.

Final Action

No change.

ProPAC Recommendation 3: Discretionary Adjustment Factor

For fiscal year 1990, the net allowance for scientific and technological advancement and productivity improvement in the discretionary adjustment factor should be zero.

Secretary's Response

None

ProPAC Comment

None

Final Action

No change.

ProPAC Recommendation 4: Adjustments for Case-Mix Change

For fiscal year 1990, the PPS standardized amounts should be reduced by 0.7 percent to account for increased payments from case-mix index change. This adjustment reflects:

- A 3.0 percent reduction for the estimated case-mix index change during fiscal year 1989;

- o A positive allowance of 1.5 percent for real across-DRG case-mix index change during fiscal year 1989; and

- o A positive allowance of 0.8 percent for within-DRG case-complexity change during fiscal year 1989.

Given its importance for hospital payments, the Commission urges the Secretary to continue research that will help measure case-mix change and its components.

Secretary's Response

None; however, see proposed changes under recalibration.

ProPAC Comment

None; however, see comments under recalibration.

Final Action

No change, see comments under recalibration.

ProPAC Recommendation 5: Adjustment to the Level of the Urban Standardized Amounts

The update factor for fiscal year 1990 should include an adjustment to lower the urban standardized amounts by 0.8 percent. No reduction should be applied to the rural standardized amount. The reduction is the final portion of a three-year phased adjustment previously recommended by the Commission. It reflects the Commission's judgment of how information on average Medicare costs per case from the first year of PPS should be incorporated into the update factor.

Secretary's Response

None

ProPAC Comment

None

Final Action

No change.

ProPAC Recommendation 6: Additional Update for Hospitals in Large Urban Areas

For fiscal year 1990, urban hospitals in Metropolitan Statistical Areas with more than 1 million people should receive an update factor 0.5 percent more than hospitals in other

MSAs. This should be accomplished by a 0.2 percent increase to the standardized amounts for large urban areas combined with a 0.3 percent reduction to the other urban standardized amounts.

The higher costs of hospitals located in large urban areas are not fully recognized by current PPS payment policy. Because a differential update factor is an imprecise method of adjustment, more research should be undertaken to further the understanding of the sources of higher costs in these areas. Simultaneously, a broad review of PPS payment equity should be undertaken, including consideration of overlap among current payment adjustments.

Secretary's Response

The Secretary agrees that hospitals in large urban areas should receive a higher update.

ProPAC Comment

None

Final Action

No change.

ProPAC Recommendation 7: Update Factor for Excluded Hospitals and Distinct-Part Units

For fiscal year 1990, the increase in the target rate for excluded hospitals and distinct-part units should be determined separately from the PPS update factor. The rehabilitation, psychiatric, and long-term facilities' target rate of increase should reflect the projected increase in the hospital market basket for these hospitals corrected for forecast error. The target rate of increase for children's hospitals should reflect the projected rate of increase in the PPS hospital market basket corrected for forecast error.

Secretary's Response

The regulations contain the statutory update equal to the increase in the market basket, currently estimated at 5.8 percent.

The Secretary proposes an increase greater than market basket minus 1.5 percent.

ProPAC Comment

The Commission agrees that an update higher than market basket minus 1.5 percentage points is warranted. In addition, the Commission believes the update should equal the market basket increase for these hospitals (except for pediatric facilities, where the update

should equal the PPS market basket increase). We encourage the Secretary to continue to compute a separate PPS-exempt market basket. While the differences at this time may be marginal, this situation may change in the future.

Final Action

The Secretary agrees that a separate market basket for exempt hospitals, specifically rehabilitation, should be explored. An indepth analysis will be conducted on this issue in conjunction with the overall rebasing of the hospital market basket for fiscal year 1991.

ADJUSTMENTS TO THE PPS PAYMENT FORMULA

ProPAC Recommendation 8: Indirect Medical Education Adjustment

The Commission recommends that the Secretary seek legislation to reduce the indirect medical education adjustment from its current level of 7.7 percent to 6.6 percent for fiscal year 1990. This reduction should be implemented in a budget neutral fashion, with the savings returned to all hospitals through corresponding increases in the standardized amounts.

Secretary's Response

The Secretary agrees that the indirect medical eduction adjustment should be reduced. However, the Secretary believes it should be reduced to 4.05 percent (ProPAC's estimates was 4.4 percent) immediately. In addition, the Secretary believes payments to other hospitals are adequate; therefore, the reduction should not be implemented in a budget neutral manner.

ProPAC Comment

The Commission's recommendation to lower this adjustment to 6.6 percent was based not only on careful consideration of the results of statistical analysis, but more importantly, critical indicators of hospitals' financial performance, and appropriate public policy options. The Commission believes that a reduction below the 6.6 percent level for fiscal year 1990 would not be consistent with teaching hospitals overall financial status.

The Commission believes it is important to consider both the overall financial position of institutions that serve Medicare beneficiaries, in addition to Medicare operating margins, when developing Medicare payment policy. A gradual lowering of the teaching adjustment would meet the payment policy objectives of PPS while maintaining sensitivity to the overall financial position of these hospitals.

Final Action

No change. The Secretary did indicate, however, that the recommendation was based on the results of a 1985 study conducted by the Congressional Budget Office (CBO). In

addition, recent analyses conducted by the General Accounting Office and CBO supported the Secretary's recommendation. However, the Secretary is not seeking legislation to modify the adjustment.

ProPAC Recommendation 9: Outlier Payment Policy

The Commission believes that modifications in outlier payment methodology that were implemented during fiscal year 1989 represent an improvement in the payment system. The Secretary should continue to examine methods for improving the effectiveness of outlier payment in accomplishing its two major objectives: protecting hospitals from the risk of extraordinarily costly cases, and protecting types of patients who are more likely to be extraordinarily costly from a potential decrease in access to inpatient hospital services. This examination should include a review of the fundamental structure of outlier payment policy.

Secretary's Response

The Secretary agrees to continue examination of outlier payment policy. In particular, the Secretary is interested in developing policies to protect small rural hospitals from financial hardship due to costly cases. In addition, the Secretary believes that the PROs should conduct the assessment of whether patients are denied access to health care services.

ProPAC Comment

None

Final Action

No change.

DATA COLLECTION AND MEASUREMENT

ProPAC Recommendation 10: Updating the Area Wage Index

The Commission strongly urges the Secretary to collect more current data on hospital wages and hours of employment, and to use these data to update the wage index for fiscal year 1990. The Secretary also should develop a permanent mechanism for obtaining accurate hospital wage data annually. In addition, the Commission urges the Secretary to update the wage index at least every other year.

Secretary's Response

The Secretary shares ProPAC's concern. A survey has been distributed to collect 1988 wage data from all PPS hospitals. Due to time constraints, the new wage index will not

be developed earlier than March 1990. Therefore, it cannot be used for adjusting the fiscal year 1990 rates.

ProPAC Comment

None

Final Action

No change.

ProPAC Recommendation 11: Improving the Cost Data Used for Decision Making

The Secretary should initiate the developmental work necessary to secure the future role of the Medicare Cost Report as a vital information source for policy evaluation and decision making. Although the cost report was originally developed and continues to be used as a reimbursement tool, it is also increasingly used as a source of data. This trend will continue and should be encouraged. Efforts to improve the Medicare Cost Report should attempt to minimize the administrative burden on hospitals, fiscal intermediaries, and the Federal government.

Secretary's Response

The Secretary believes the demonstration project and electronic cost report format will result in more timely and uniform data.

ProPAC Comment

The Commission heartily endorses this project, and we anticipate assessing the results of the demonstration for national applicability. Further, ProPAC appreciates the opportunity it has had to participate in the development and conduct of the project.

In addition to the demonstration, however, ProPAC believes that a broad examination of the data needed to support decision making should be undertaken. This examination must reconcile the scope of data needs with the desire for data consistency, accuracy and timeliness, as well as reduced reporting burden.

Final Action

No change.

ProPAC Recommendation 12: Improvements in Case-Mix Measurement

The Commission urges the Secretary to immediately begin thorough evaluation of the potential consequences of adopting DRG refinements recently developed at Yale University. Preliminary results from this project appear to be positive. Much work remains to be done,

however, to understand all the implications of applying these refinements to PPS. The Commission will be pleased to cooperate with the Secretary to further this effort.

Secretary's Response

The Secretary agrees that a full assessment of the Yale refinement DRG study is necessary and will be pleased to work with ProPAC in this regard.

ProPAC Comment

None

Final Action

No change.

ProPAC Recommendation 13: Reassignment of Patients with Guillain-Barre Syndrome

The Secretary should reassign patients with Guillain-Barre syndrome from DRGs 18 and 19 to DRG 20, DRG 34 or a new DRG.

Secretary's Response

The Secretary was unable to evaluate the appropriateness of classification changes for patients with Guillain-Barre syndrome. As a result, no changes in this area are proposed.

ProPAC Comment

Given the magnitude of the differences between costs for Guillain-Barre cases and other cases in DRGs 18 and 19, it is unclear why HCFA feels analysis of fiscal year 1988 data is essential. ProPAC believes strongly that PPS must be sufficiently flexible to correct such payment inequities in a timely fashion.

Final Action

The Secretary agreed that HCFA's preliminary review of data indicates that these GBS patients consume more resources than other cases within the same DRG. The Secretary will examine the issue of appropriate DRG assignment of these cases.

QUALITY OF CARE

ProPAC Recommendation 14: Evaluation of PRO Review of Quality of Care

The Secretary should evaluate the impact of the Peer Review Organizations on quality of care. Intensified analysis of the PRO findings and validation of the PRO quality review

process should be included in the evaluation. The validity, reliability, and efficiency of the PRO quality screens should receive special emphasis in the evaluation. In addition, the Secretary should continue to develop, test, and implement more sophisticated methods of inpatient and outpatient quality review. He should also develop additional mechanisms to identify and evaluate quality of care beyond the immediate period of hospitalization, placing more emphasis on outcomes of care.

Secretary's Response

The Secretary agrees that the impact of PROs on quality of care needs evaluating. The Secretary also agrees that more sophisticated methods of inpatient and outpatient quality review should be developed, tested, and implemented.

The Secretary described current review mechanisms. One involves the SuperPRO, which validates PRO's determinations. The SuperPRO identifies quality issues that should have been addressed by the PRO using the generic screening criteria. The SuperPRO findings, including those related to generic quality screens, will be considered in the PRO evaluation process. The second method involves the PRO Monitoring Protocol and Tracking System (PROMPTS). PROMPTS also monitors PROs performance in the area of quality of care. PROMPTS includes regional office review of PRO clinical decisions, including generic screen failures. In addition, the Secretary is developing methodologies for PROs to use in proposing pilot projects to improve quality measures in both the inpatient and outpatient setting.

ProPAC Comment

The Commission does not believe that these activities are an adequate or acceptable substitute for a major evaluation of the results of the PRO program. The activities cited by the Secretary are simply administrative tools used in the proper and efficient administration of the program.

The PRO programs are entering their third contract cycle. It is time to step back and undertake an independent, thorough examination of the impact of PROs on quality of care for Medicare beneficiaries, as ProPAC has recommended.

Final Action

The Secretary indicates, in addition to the review activities listed above, that a demonstration project is about to begin to review services furnished by physicians in various settings. In addition, a project is underway which collects abstracted clinical data to detect problems in the medical treatment of Medicare beneficiaries. The data generated from these and other projects will allow the Secretary to refine goals and objectives for the program.

RURAL HOSPITALS

ProPAC Recommendation 15: Rural Hospitals

The Commission is concerned about the problems affecting rural hospitals and the rural health care system, as well as the implications of these problems for access to needed health care. The Commission recognizes that these problems extend beyond PPS and Medicare. The Commission urges the Secretary to continue the Department's rural health care research and policy agenda. Meanwhile, the Commission will continue its analysis of the effects of PPS on rural hospitals.

Secretary' Response

The Secretary believes that administrative and legislative changes have improved payment equity for rural hospitals. However, changes in PPS cannot address the fundamental problems facing rural hospitals that arise from changing economic circumstances. The Secretary is placing priority on research related to rural hospitals. (For additional information, see discussion under Sole Community Hospitals and beneficiary access to care in rural areas.)

ProPAC Comment

The Commission is pleased that the Secretary will conduct research on issues related to rural hospitals. In addition, we agree with the Secretary that "changes to the Medicare program alone will not be sufficient to assure essential access to rural health care."

Final Action

No change.

AMBULATORY SURGERY PAYMENT

ProPAC Recommendation 16: Medicare Payment for Hospital Outpatient Surgery

Beginning in fiscal year 1990, Medicare payment for the facility component of hospital outpatient surgery, including capital, should be entirely prospective. Separate rates should be established for each of the six groups proposed for payment of services furnished in freestanding ambulatory surgery centers (ASCs). The rate for fiscal year 1990 should be based on a blend of hospital-specific costs, average hospital costs, and the rate paid to ASCs. The rate should be updated annually following the approach used under PPS. The overall level of the prospective rates should be set so that the sum of Medicare and beneficiary payments to hospitals would be the same in fiscal year 1990 as they would have been under current policy. Payments should reflect differences in area wages. These changes in hospital outpatient surgery payment policy should apply to the list of ASC-approved procedures only; other Medicare payment provisions should continue for non-list

procedures. The Commission is not recommending differential treatment of eye and ear specialty hospitals.

Secretary's Response

While the Secretary agrees with the objective to develop a PPS for hospital outpatient surgery, it disagrees with ProPAC's approach. The Secretary believes that the system should: (1) ensure that Medicare expenditures are no greater than current law, and (2) create a level playing field between ASCs and OPDs where only justifiable differences in costs should be recognized. Therefore, the Secretary believes no changes should be instituted at this time.

ProPAC Comment

The Commission agrees with these basic principles and believes that its recommended approach is consistent with the Secretary's goals. In its recommendation, ProPAC stipulated that the payment rates for fiscal year 1990 should be set so that combined Medicare and beneficiary payments to hospitals would be the same as under current policy. The Commission believes that its approach will continue to maintain financial pressure on hospitals to reduce ambulatory surgery costs.

Beyond the recommended technical modifications, ProPAC's approach calls for a fundamental change in Medicare payment for hospital outpatient surgery -- an entirely prospective amount, including capital. We believe that such a change is essential for achieving many of the system goals that ProPAC, the Secretary, and the Congress share. Fully prospective payments give hospitals an opportunity to earn a profit or risk a loss, thereby rewarding increased efficiency. Further, policy based on prospective rates allows for controlling the growth of payments through an annual updating process.

Final Action

No change.

ProPAC Recommendation 17: Beneficiary Liability for Hospital Outpatient Surgery

The Secretary should modify the method used to determine Part B coinsurance for certain ambulatory surgery services performed in hospital outpatient departments. Currently, beneficiary coinsurance is based on hospital submitted charges. Beneficiary coinsurance should equal 20 percent of the payment amount allowed by Medicare. The Medicare program should bear the costs of this change.

Secretary's Response

Since the Secretary is not adopting a PPS for OPD surgery, this recommendation cannot be implemented.

ProPAC Comment

The Commission realizes that Medicare expenditures could increase under this recommendation. However, ProPAC believes that the Medicare program should assume responsibility for 80 percent of the payment amount. The Secretary could modify this recommendation in a manner that would better protect beneficiaries while constraining increased expenditures.

Final Action

No change.

PART II -- OTHER DECISIONS AND CHANGES IN THE NPRM AND FINAL RULE

Secretary's Proposed Rule -- Recalibration of DRG Weights

1. Method

The Secretary proposes to continue to use charges as the basis for recalibrating DRG relative weights. Consistent with past practices, the FY 1990 weights would be normalized by an adjustment factor so that the average GROUPER 7 case weight after recalibration is equal to the average GROUPER 6 case weight prior to recalibration.

ProPAC Comment

The Commission is disappointed that the Secretary did not use estimated costs in recalibrating the DRG weights for fiscal year 1990. The DRG weights are intended to reflect the relative average costliness of different types of cases. ProPAC continues to believe that weights based on estimated costs, which are derived by adjusting charge data for differences in hospitals' pricing practices, achieve this objective much better than weights based on unadjusted charge data. The resulting distribution of payments across DRGs and hospitals would more accurately reflect the costliness of different types of cases and provide incentives more consistent with the objectives of PPS. However, by utilizing charges, the current method is subject to hospital manipulation that may only represent business strategy and could adversely affect various institutions.

In addition, the Rand Corporation's study of alternative methodologies for recalibrating the DRG weights, referred to in the proposed rule, provides no new evidence to counter ProPAC's position. In fact, the data presented in this study only reinforce many of the arguments presented in the Commission's March 1988 report.

The study concludes that "on theoretical grounds there is no reason to favor one set of weights over the other," and that "other criteria must be used to determine the desirability

of the cost-based and charge-based methods, such as timeliness of the data and distributional implications across providers and patients."

As we have stated before, the Commission believes that the timeliness issue is less of a problem than is argued in the proposed rule. It is true that charge data are available for discharges during fiscal year 1988, the fifth year since PPS began, while the most recent reasonably complete cost data file applies to hospitals' fourth cost reporting period under PPS. This fact, however, overstates the differences in the timeliness of the two data sources.

Final Action

No change.

2. Reduction in DRG Weights

The Secretary proposes to reduce the average GROUPER 6 case weight by 1.35 percent before recalibrating. This proposed reduction is to adjust for increase in the Medicare case-mix index that are asserted to be due solely to changes in the GROUPER between FY 1986 and FY 1988.

Several changes were made in GROUPER 4 (FY 1987) and GROUPER 5 (FY 1988), that may have increased the potential for upcoding. For instance, GROUPER 4 implemented a new DRG for extensive burns with an operating room procedure, and GROUPER 5 implemented two new DRGs for tracheostomy and mechanical ventilator cases, and eliminated age over 69 as a criterion for CC.

The Secretary's analysis indicates that the case-mix index value for FY 1988 cases is higher when the same cases are processed with GROUPER 5 than with GROUPER 3. The Secretary believes that changes made to the GROUPER between fiscal years 1986 and 1988 caused this increase in the case-mix index resulting in increased program expenditures.

Therefore, in the Secretary's judgment, of the total increase in the case-mix index value from FY 1986 to FY 1988 (6.4 percent), 1.35 percent is the result of recalibration and changes made to the GROUPER program, and should be removed by renormalizing the relative weights.

ProPAC's Comment

The Commission believes that the proposed adjustment of the DRG weights is inappropriate and ill-advised, because:

- It represents an administrative reduction of the overall level of PPS payments;
- It is inconsistent with prior methods that have accounted for increases in case-mix index; and

- It adjusts for an increases in the case-mix index that may partly reflect changes for which hospitals should legitimately be compensated.

ProPAC has long recognized and regularly asserted the importance of accounting for the effects of case-mix index change in updating the PPS payment rates. These effects, however, should be considered explicitly in the determination of the PPS update, rather than separately in what amounts to an administrative reduction in the payment rates.

The difference in the case-mix index that HCFA has obtained by applying two different versions of the GROUPER program to the FY 1988 MedPAR data is clearly not associated with a change in resource requirements over time, since it involves the same set of discharges. This difference, however, comprises only part of the total case-mix index increase that has, since the outset, been a factor in the debate on the update of the PPS rates. The HCFA analysis has isolated a specific component, but not a new source, of case-mix index increase.

Clearly, not all of the increase in the case-mix index between successive versions of the GROUPER is due to real increases in patient resource requirements. In fact, the total case-mix index increase that is attributable solely to coding changes has been estimated to be far in excess of the proposed 1.35 percent adjustment. This factor has, or should be, considered in the debate on the update of the PPS rates. The Commission must, then, strongly object to the proposed additional reduction in PPS payments through the adjustment of the DRG weights.

Final Action

The Secretary modified the methodology used to compute the adjustment and reduced DRG weights by 1.22 percent for the effects of GROUPER changes.

Secretary's Proposed Rule -- Changes to DRG Classifications and Weighting Factors

1. <u>MDC 4: Diseases and Disorders of the Respiratory System</u>

The Secretary proposes to revise DRG 475 (respiratory system diagnosis with ventilator support) by eliminating the requirement of coding the insertion of an endotracheal tube. This would allow for cases to be assigned to DRG 475 when a ventilator patient with a principal diagnosis in MDC 4 is intubated in another setting and then admitted for inpatient treatment. The Secretary further revised rules to DRG 475 by now allowing all transfer cases from DRG 474 and 475 to be assigned to DRG 475 at the receving hospital.

The Secretary plans to study the effect of the Yale DRG Refinement Project on classification of such cases.

ProPAC's Comment

The Commission agrees with the proposed change of requiring only procedure code 93.92 and a principle diagnosis in MDC 4 for assignment to DRG 475. This change should alleviate the problem of assigning patients to DRG 475 who have been intubated in one location and admitted to another site. The Commission further agrees wtih the reclassification of DRG 474 and DRG 475 transfers.

The Commission is concerned about the costly tracheostomy and mechanical ventilation cases outside of MDC 4, and encourages the Secretary to continue his efforts to more appropriately classify these cases.

Final Action

No change.

2. Cochlear Implants

The Secretary conducted an analysis using MedPAR 1986 data which showed that mean standardized charges for cochlear implant cases were lower than mean standardized charges for all other procedure in DRG 49. This result may be caused by inaccurate coding of such cases. As a result, the Secretary encourages better coding of these cases and will continue to monitor the appropriateness of assigning cochlear implant cases to DRG 49.

ProPAC's Comment

The Commission supports the Secretary's efforts.

Final Action

No change.

3. Refinement of Complications and Comorbidities List

The Secretary proposes to eliminate several minor cardiac block and dysrhythmia diagnoses from the CC list, to revise the exclusion lists and add a number of CCs to the list.

ProPAC's Comment

The Commission supports the Secretary's proposal to eliminate a number of minor cardiac block and dysrhythmias from the CC list. In addition, the Commission agrees with the limited revisions of the CC exclusion list and his efforts to refine the CC list.

Final Action

The proposal with minor changes was implemented.

4. **Acute Myocardial Infarction (AMI)**

The Secretary proposed creation of new fifth digit codes for AMI cases.

ProPAC's Comment

The Commission supports the Secretary's institution of new fifth digit codes for cases of myocardial infarction (MI). These codes should identify non-acute MI cases currently assigned to DRGs 121 and 122 and reassign them to a more appropriate DRG in terms of both clinical characteristics and resource use. This action will also result in more appropriate payment weights for acute MI cases assigned to DRGs 121 and 122 after recalibration takes effect.

The Commission is concerned, however, about short-term payment inequities that would persist in the interim period for cases remaining in DRGs 121 and 122. In order to assure appropriate payments for DRGs 121 and 122 for FY 1990, the Commission recommends either of the following courses of action. The first would be to leave these cases in DRGs 121 and 122 through FY90 while assigning the new codes, and reassign them as part of recalibration for FY 1991. The second option is to use an alternative, temporary, FY 1990 weight for these DRGs, which would be approximately 1.7349 for DRG 121 and 1.1823 for DRG 122. These weights were estimated using all cases with a principal diagnosis of AMI, and the top 33 percent of the most costly cases that had AMI as a secondary diagnosis.

5. **Other Proposed Changes**

The Secretary proposes to revise the surgical hierarchy for MDC 5 (diseases and disorders of the circulatory system) and MDC 8 (diseases and disorders of the musculoskeletal system and connective tissue). In addition, The Secretary proposes two DRG classification changes to reduce assignment of cases to DRG 477 (non-extensive OR procedure unrelated to principal diagnosis). The revisions involve procedure codes relating to other dilation and curettage and aspiration curettage following delivery or abortion.

ProPAC's Comment

None

Final Action

These changes, with slight modifications, were implemented.

Secretary Proposed Rule -- Changes to the Wage Index

1. Update the Wage Index Data

The Secretary proposes to base the wage index solely on 1984 wage data. The current estimate indicates this change will not significantly impact aggregate prospective payments.

ProPAC's Comment

None

Final Action

No change.

2. Future Updates to the Hospital Wage Index

The Secretary developed two survey forms to collect data for the FY 1991 update of the wage index as required by OBRA 1987. However, before implementing this updated wage index or deciding on future data collection by occupational categories and incorporating future wage survey forms into the hospital cost report, the Secretary is soliciting comments on specific issues.

ProPAC Comment

The Commission believes that occupational-mix differences may lead to a significant bias in the wage index. However, we are aware that many hospitals would find it difficult, at present, to provide accurate data by occupational category. Therefore, the Commission believes it is important to determine, if possible, whether occupational-mix adjustment would yield substantial benefits, before imposing the burden of regular data collection on the industry.

The Commission believes it may be possible to obtain a rough estimate of the impact of occupational-mix adjustment using data from the 1980 Census. Despite the data limitations (e.g., the age of the data and types of respondents), we believe that these data may provide a useful, albeit conservative, test of the need for such an adjustment to the wage index. The Commission will continue to explore this issue and share any information with the Secretary as it becomes available.

Final Action

No change.

Secretary's Proposed Rule -- Burn Outliers

The Secretary proposes to pay burn outlier cases similar to other DRGs. Cost outlier cases would be paid using 90 percent marginal cost factor (instead of 75 percent used for other cases) and day outliers would be paid using a 60 percent marginal cost factor (like other

cases). Cases that qualify as both day and cost outliers (dual outliers) would be paid using the method that provides the greatest payment.

Commission Comment

The Commission recommended, as an interim measure, that burn outlier cases be paid under a cost-only outlier policy. Our analysis indicated that this method better reflects resource differences between specialized burn centers and other PPS hospitals. However, the Commission agrees that the Secretary's proposal is an improvement over current law. Our analysis found that this method reduced the losses associated with treating burn cases at specialized centers more than current law.

Final Action

No change.

Secretary's Proposed Rule -- Payments to Sole Community Hospitals

The Secretary proposes to allow a hospital that cancels its SCH status to requalify as a SCH after one full year passes since its cancellation was effective, provided they meet the criteria for qualification.

The Secretary proposes to extend indefinitely the provision that allows SCHs to receive a payment adjustment when it experiences a significant increase in operating costs resulting from new inpatient services or facilities.

The Secretary proposes to allow FIs to determine payment adjustment for SCHs experiencing significant volume decreases.

Further, the Secretary proposes to eliminate the market share test for hospitals located more than 35 miles from a like hospital.

The Secretary will assess whether modifications should be made in the market share test for hospitals located between 25 to 35 miles from a like hospital.

ProPAC's Comment

Over the past several years, the Commission has recommended that the Secretary evaluate the adequacy of sole community hospital (SCH) policies and is pleased that the Secretary is undertaking such a review. The Commission has been especially concerned with protecting Medicare beneficiaries' access to care in isolated rural areas and is, therefore, generally supportive of the Secretary's efforts regarding sole community hospitals.

The Commission is pleased that the Secretary proposes to eliminate this requirement for hospitals located more than 35 miles from a like hospital. The Commission remains concerned, however, that the market test requirement would be retained for hospitals

located between 25 and 35 miles from a like hospital. Commission simulations showed that very few hospitals are able to meet this criterion.

The Commission is also pleased that the Secretary proposes to simplify the determination of the volume adjustment for SCHs. However, ProPAC believes that the decision process would be expedited if the time period in which the fiscal intermediary must make its determination is explicitly shortened by at least one-third to 90 days from the current 180-day period. The Secretary also proposes that the intermediaries use the current criteria to review applications for the volume adjustment. Although the Commission supports the issuance of the criteria to intermediaries, we believe that HCFA should establish a review process to ensure nation-wide uniformity in intermediaries' determination of the volume adjustments.

Final Action

No change.

Secretary's Proposed Rule -- Rural Referral Centers

Updating of Criteria

A rural hospital must meet several criteria to qualify as a referral center. One of the criteria is that the hospital have 275 or more beds available for use. If the hospital does not meet the bed size criterion it can qualify by meeting two mandatory criteria (number of discharges and case-mix index) and at least one of three optional criteria (medical staff, source of inpatient, or volume of referrals).

The Secretary proposes for cost reporting periods beginning on or after October 1, 1989, to qualify as a referral center a hospital's case-mix index value for FY 1988 would have to be at least (a) 1.2187 or (b) equal to the median case-mix value for urban hospitals (excluding those with approved teaching programs). In addition, the hospital's number of discharges in FY 1988 must also be at least (a) 5,000 or (b) equal to the median number of discharges for urban hospitals in the census region.

Retention of Referral Center Status

OBRA 1986 provided that any hospital classified as a referral center on the date of enactment of that law would continue to be so classified for cost reporting periods beginning on or after October 1, 1986 and before October 1, 1989. With the expiration of this legislation, the Secretary proposes to implement the following retention policy. To retain status as a referral center, a hospital must meet the criteria for classification for at least 2 of the 3 years after it qualifies or must qualify on the basis of the requirements for the current year. The Secretary projects that 25 percent of hospitals currently designated as rural referral centers will not meet the retention criteria.

ProPAC's Comment

The Commission believes that the Secretary should reevaluate the thresholds that enable a rural hospital to qualify as a rural referral center. Although the criteria that RRCs must meet are statutorily required, both the number of discharges and case-mix index should be evaluated for their appropriateness as referral thresholds. Furthermore, the Commission believes that changes in PPS policy should be implemented in a budget neutral fashion.

Final Action

No change.

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
1	1	SURG	CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA	3.4873	3.5670	2.3
2	1	SURG	CRANIOTOMY FOR TRAUMA AGE >17	4.1406	4.1379	-0.1
3	1	SURG	CRANIOTOMY AGE 0-17	2.9183	2.8830	-1.2
4	1	SURG	SPINAL PROCEDURES	2.6837	2.6483	-1.3
5	1	SURG	EXTRACRANIAL VASCULAR PROCEDURES	1.5585	1.5214	-2.4
6	1	SURG	CARPAL TUNNEL RELEASE	0.4496	0.4709	4.7
7	1	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC WITH CC	2.8433	3.1110	9.4
8	1	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC W/O CC	0.7432	0.7355	-1.0
9	1	MED	SPINAL DISORDERS & INJURIES	1.2857	1.4058	9.3
10	1	MED	NERVOUS SYSTEM NEOPLASMS WITH CC	1.2443	1.2449	0.0
11	1	MED	NERVOUS SYSTEM NEOPLASMS W/O CC	0.7852	0.7451	-5.1
12	1	MED	DEGENERATIVE NERVOUS SYSTEM DISORDERS	0.9296	0.9391	1.0
13	1	MED	MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA	0.9281	0.8699	-6.3
14	1	MED	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA	1.2348	1.2260	-0.7
15	1	MED	TRANSIENT ISCHEMIC ATTACK & PRECEREBRAL OCCLUSIONS	0.6333	0.6350	0.3
16	1	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS WITH CC	1.0512	1.0949	4.2
17	1	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC	0.6302	0.6452	2.4
18	1	MED	CRANIAL & PERIPHERAL NERVE DISORDERS WITH CC	0.9585	0.9640	0.6
19	1	MED	CRANIAL & PERIPHERAL NERVE DISORDERS W/O CC	0.6085	0.5869	-3.5
20	1	MED	NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS	1.7083	1.7817	4.3
21	1	MED	VIRAL MENINGITIS	1.3601	1.4190	4.3
22	1	MED	HYPERTENSIVE ENCEPHALOPATHY	0.7025	0.6981	-0.6
23	1	MED	NONTRAUMATIC STUPOR & COMA	0.9441	0.8698	-7.9
24	1	MED	SEIZURE & HEADACHE AGE >17 WITH CC	0.9528	0.9669	1.5
25	1	MED	SEIZURE & HEADACHE AGE >17 W/O CC	0.5332	0.5270	-1.2
26	1	MED	SEIZURE & HEADACHE AGE 0-17	0.9116	0.7313	-19.8
27	1	MED	TRAUMATIC STUPOR & COMA, COMA >1 HR	1.6526	1.6124	-2.4
28	1	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 WITH CC	1.2170	1.2750	4.8
29	1	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 W/O CC	0.5937	0.5730	-3.5
30	1	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE 0-17	0.3539	0.3496	-1.2
31	1	MED	CONCUSSION AGE >17 WITH CC	0.6667	0.7007	5.1
32	1	MED	CONCUSSION AGE >17 W/O CC	0.4063	0.4038	-0.6
33	1	MED	CONCUSSION AGE 0-17	0.2457	0.2427	-1.2
34	1	MED	OTHER DISORDERS OF NERVOUS SYSTEM WITH CC	1.2705	1.2069	-5.0
35	1	MED	OTHER DISORDERS OF NERVOUS SYSTEM W/O CC	0.5770	0.5597	-3.0

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
36	2	SURG	RETINAL PROCEDURES	0.6571	0.6443	-1.9
37	2	SURG	ORBITAL PROCEDURES	0.7274	0.7415	1.9
38	2	SURG	PRIMARY IRIS PROCEDURES	0.3692	0.3550	-3.8
39	2	SURG	LENS PROCEDURES WITH OR WITHOUT VITRECTOMY	0.4722	0.4494	-4.8
40	2	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE >17	0.4763	0.4762	-0.0
41	2	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE 0-17	0.3657	0.3613	-1.2
42	2	SURG	INTRAOCULAR PROCEDURES RETINA, IRIS & LENS	0.6424	0.6305	-1.9
43	2	MED	HYPHEMA	0.3699	0.3350	-9.4
44	2	MED	ACUTE MAJOR EYE INFECTIONS	0.6346	0.6035	-4.9
45	2	MED	NEUROLOGICAL EYE DISORDERS	0.5532	0.5454	-1.4
46	2	MED	OTHER DISORDERS OF THE EYE AGE >17 WITH CC	0.6321	0.6495	2.8
47	2	MED	OTHER DISORDERS OF THE EYE AGE >17 W/O CC	0.3652	0.3539	-3.1
48	2	MED	OTHER DISORDERS OF THE EYE AGE 0-17	0.4018	0.3969	-1.2
49	2	SURG	MAJOR HEAD & NECK PROCEDURES	2.8418	2.8633	0.8
50	2	SURG	SIALOADENECTOMY	0.6448	0.6298	-2.3
51	3	SURG	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY	0.5708	0.5647	-1.1
52	3	SURG	CLEFT LIP & PALATE REPAIR	0.8499	0.8129	-4.4
53	3	SURG	SINUS & MASTOID PROCEDURES AGE >17	0.6172	0.6161	-0.2
54	3	SURG	SINUS & MASTOID PROCEDURES AGE 0-17	0.6889	0.6806	-1.2
55	3	SURG	MISCELLANEOUS EAR, NOSE, MOUTH & THROAT PROCEDURES	0.4613	0.4879	5.8
56	3	SURG	RHINOPLASTY	0.4684	0.4881	4.2
57	3	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	0.9321	0.9313	-0.1
58	3	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE 0-17	0.3097	0.3060	-1.2
59	3	SURG	TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	0.3901	0.3878	-0.6
60	3	SURG	TONSILLECTOMY &/OR ADENOIDECYOMY ONLY, AGE 0-17	0.2616	0.2584	-1.2
61	3	SURG	MYRINGOTOMY W TUBE INSERTION AGE >17	0.7994	0.6945	-13.1
62	3	SURG	MYRINGOTOMY W TUBE INSERTION AGE 0-17	0.3089	0.3052	-1.2
63	3	SURG	OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES	1.1811	1.1882	0.6
64	3	MED	EAR, NOSE, MOUTH & THROAT MALIGNANCY	1.0883	1.1762	8.1
65	3	MED	DYSEQUILIBRIUM	0.4557	0.4564	0.2
66	3	MED	EPISTAXIS	0.4394	0.4496	2.3
67	3	MED	EPIGLOTTITIS	1.0470	0.8589	-18.0
68	3	MED	OTITIS MEDIA & URI AGE > 17 WITH CC	0.7806	0.7232	-7.4
69	3	MED	OTITIS MEDIA & URI AGE > 17 W/O CC	0.5349	0.5281	-1.3
70	3	MED	OTITIS MEDIA & URI AGE 0-17	0.5853	0.4589	-21.6

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
71	3	MED	LARYNGOTRACHEITIS	0.8933	0.7307	-18.2
72	3	MED	NASAL TRAUMA & DEFORMITY	0.5256	0.5528	5.2
73	3	MED	OTHER EAR, NOSE, MOUTH, & THROAT DIAGNOSES AGE >17	0.7629	0.7525	-1.4
74	3	MED	OTHER EAR, NOSE, MOUTH, & THROAT DIAGNOSES AGE 0-17	0.3427	0.3386	-1.2
75	4	SURG	MAJOR CHEST PROCEDURES	3.0335	2.9603	-2.4
76	4	SURG	OTHER RESP SYSTEM O.R. PROCEDURES WITH CC	2.4324	2.3038	-5.3
77	4	SURG	OTHER RESP SYSTEM O.R. PROCEDURES W/O CC	1.0488	1.0895	3.9
78	4	MED	PULMONARY EMBOLISM	1.4685	1.4320	-2.5
79	4	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 WITH CC	2.0375	1.8530	-9.1
80	4	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 W/O CC	1.2339	1.1382	-7.8
81	4	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE 0-17	1.1032	1.0899	-1.2
82	4	MED	RESPIRATORY NEOPLASMS	1.2367	1.2016	-2.8
83	4	MED	MAJOR CHEST TRAUMA WITH CC	1.0107	1.0064	-0.4
84	4	MED	MAJOR CHEST TRAUMA W/O CC	0.5214	0.5009	-3.9
85	4	MED	PLEURAL EFFUSION WITH CC	1.1663	1.1437	-1.9
86	4	MED	PLEURAL EFFUSION W/O CC	0.7357	0.7223	-1.8
87	4	MED	PULMONARY EDEMA & RESPIRATORY FAILURE	1.5108	1.4597	-3.4
88	4	MED	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1.1210	1.0153	-9.4
89	4	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 WITH CC	1.2695	1.2059	-5.0
90	4	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 W/O CC	0.8268	0.7790	-5.8
91	4	MED	SIMPLE PNEUMONIA & PLEURISY AGE 0-17	0.7603	0.7465	-1.8
92	4	MED	INTERSTITIAL LUNG DISEASE WITH CC	1.3142	1.2182	-7.3
93	4	MED	INTERSTITIAL LUNG DISEASE W/O CC	0.8364	0.7936	-5.1
94	4	MED	PNEUMOTHORAX WITH CC	1.3972	1.3378	-4.3
95	4	MED	PNEUMOTHORAX W/O CC	0.7104	0.6665	-6.2
96	4	MED	BRONCHITIS & ASTHMA AGE >17 WITH CC	1.0137	0.9734	-4.0
97	4	MED	BRONCHITIS & ASTHMA AGE >17 W/O CC	0.7076	0.6810	-3.8
98	4	MED	BRONCHITIS & ASTHMA AGE 0-17	0.6356	0.8942	40.7
99	4	MED	RESPIRATORY SIGNS & SYMPTOMS WITH CC	0.7450	0.8493	14.0
100	4	MED	RESPIRATORY SIGNS & SYMPTOMS W/O CC	0.5080	0.5125	0.9
101	4	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES WITH CC	0.9841	0.9966	1.3
102	4	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES W/O CC	0.5818	0.5593	-3.9
103	5	SURG	HEART TRANSPLANT	14.7080	13.2352	-10.0
104	5	SURG	CARDIAC VALVE PROCEDURE W PUMP & W CARDIAC CATH	7.5631	7.8432	3.7
105	5	SURG	CARDIAC VALVE PROCEDURE W PUMP & W/O CARDIAC CATH	5.9439	5.9965	0.9

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DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
106	5	SURG	CORONARY BYPASS W CARDIAC CATH	5.5493	5.6558	1.9
107	5	SURG	CORONARY BYPASS W/O CARDIAC CATH	4.2102	4.2260	0.4
108	5	SURG	OTHER CARDIOTHORACIC OR VASCULAR PROCEDURES, W PUMP	5.5817	5.7332	2.7
109	5	SURG	OTHER CARDIOTHORACIC PROCEDURES W/O PUMP	3.7756	3.7746	-0.0
110	5	SURG	MAJOR RECONSTRUCTIVE VASCULAR PROC W/O PUMP WITH CC	3.6677	3.5967	-1.9
111	5	SURG	MAJOR RECONSTRUCTIVE VASCULAR PROC W/O PUMP W/O CC	2.1617	2.0351	-5.9
112	5	SURG	VASCULAR PROCEDURES EXCEPT MAJOR RECONSTRUCTION W/O PUMP	1.9042	1.9106	0.3
113	5	SURG	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB & TOE	2.4673	2.4616	-0.2
114	5	SURG	UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDERS	1.7145	1.6119	-6.0
115	5	SURG	PERM CARDIAC PACEMAKER IMPLANT W AMI, HEART FAILURE, OR SHOCK	3.9800	3.8541	-3.2
116	5	SURG	PERM CARDIAC PACEMAKER IMPLANT W/O AMI, HEART FAILURE, OR SHOCK	2.6632	2.5793	-3.2
117	5	SURG	CARDIAC PACEMAKER REVISION EXCEPT DEVICE REPLACEMENT	1.2223	1.8867	54.4
118	5	SURG	CARDIAC PACEMAKER DEVICE REPLACEMENT	1.6529	2.0267	22.6
119	5	SURG	VEIN LIGATION & STRIPPING	0.8264	0.8269	0.1
120	5	SURG	OTHER CIRCULATORY SYSTEM O.R. PROCEDURES	2.7403	2.7059	-1.3
121	5	MED	CIRCULATORY DISORDERS W AMI & C.V. COMP, DISCH ALIVE	1.6545	1.6228	-1.9
122	5	MED	CIRCULATORY DISORDERS W AMI W/O C.V. COMP, DISCH ALIVE	1.1455	1.1233	-1.9
123	5	MED	CIRCULATORY DISORDERS W AMI, EXPIRED	1.4232	1.3934	-2.1
124	5	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH & COMPLEX DIAG	1.1854	1.1876	0.2
125	5	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O COMPLEX DIAG	0.6823	0.6874	0.7
126	5	MED	ACUTE & SUBACUTE ENDOCARDITIS	3.0532	2.9894	-2.1
127	5	MED	HEART FAILURE & SHOCK	1.0365	1.0169	-1.9
128	5	MED	DEEP VEIN THROMBOPHLEBITIS	0.8359	0.8129	-2.8
129	5	MED	CARDIAC ARREST, UNEXPLAINED	1.5132	1.3986	-7.6
130	5	MED	PERIPHERAL VASCULAR DISORDERS WITH CC	0.8896	0.8921	0.3
131	5	MED	PERIPHERAL VASCULAR DISORDERS W/O CC	0.5886	0.5814	-1.2
132	5	MED	ATHEROSCLEROSIS WITH CC	0.7738	0.7565	-2.2
133	5	MED	ATHEROSCLEROSIS W/O CC	0.5624	0.5420	-3.6
134	5	MED	HYPERTENSION	0.6026	0.5964	-1.0
135	5	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE >17 WITH CC	0.8927	0.9018	1.0
136	5	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE >17 W/O CC	0.5713	0.5488	-3.9
137	5	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE 0-17	0.6315	0.6239	-1.2
138	5	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS WITH CC	0.8488	0.8707	2.6
139	5	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC	0.5742	0.5715	-0.5
140	5	MED	ANGINA PECTORIS	0.6559	0.6387	-2.6

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
141	5	MED	SYNCOPE & COLLAPSE WITH CC	0.6882	0.6920	0.6
142	5	MED	SYNCOPE & COOLAPSE W/O CC	0.5203	0.5149	-1.0
143	5	MED	CHEST PAIN	0.5397	0.5226	-3.2
144	5	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES WITH CC	1.1483	1.1035	-3.9
145	5	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC	0.6434	0.6236	-3.1
146	6	SURG	RECTAL RESECTION WITH CC	2.7773	2.7386	-1.4
147	6	SURG	RECTAL RESECTION W/O CC	1.8664	1.7349	-7.0
148	6	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES WITH CC	3.2745	3.2705	-0.1
149	6	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.7756	1.6636	-6.3
150	6	SURG	PERITONEAL ADHESIOLYSIS WITH CC	2.7173	2.6617	-2.0
151	6	SURG	PERITONEAL ADHESIOLYSIS W/O CC	1.4527	1.3478	-7.2
152	6	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES WITH CC	1.4807	1.4678	-0.9
153	6	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.0636	1.0149	-4.6
154	6	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE >17 WITH CC	3.8125	3.8172	0.1
155	6	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE >17 W/O CC	1.7209	1.6050	-6.7
156	6	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE 0-17	0.8382	0.8281	-1.2
157	6	SURG	ANAL & STOMAL PROCEDURES WITH CC	0.9779	0.9571	-2.1
158	6	SURG	ANAL & STOMAL PROCEDURES W/O CC	0.5287	0.5136	-2.9
159	6	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 WITH CC	1.1103	1.1057	-0.4
160	6	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 W/O CC	0.6585	0.6314	-4.1
161	6	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 WITH CC	0.7331	0.7337	0.1
162	6	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 W/O CC	0.4714	0.4485	-4.9
163	6	SURG	HERNIA PROCEDURES AGE 0-17	0.9388	0.7729	-17.7
164	6	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG WITH CC	2.4065	2.3737	-1.4
165	6	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W/O CC	1.4236	1.3377	-6.0
166	6	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG WITH CC	1.4556	1.3991	-3.9
167	6	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAL W/O CC	0.8008	0.7922	-1.1
168	6	SURG	MOUTH PROCEDURES WITH CC	0.9713	1.0050	3.5
169	6	SURG	MOUTH PROCEDURES W/O CC	0.5320	0.5463	2.7
170	6	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES WITH CC	2.7677	2.8091	1.5
171	6	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC	1.3797	1.2563	-8.9
172	6	MED	DIGESTIVE MALIGNANCY WITH CC	1.2026	1.2216	1.6
173	6	MED	DIGESTIVE MALIGNANCY W/O CC	0.7004	0.6657	-5.0
174	6	MED	G.I. HEMORRHAGE WITH CC	0.9816	0.9620	-2.0
175	6	MED	G.I. HEMORRHAGE W/O CC	0.6376	0.5983	-6.2

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DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
176	6	MED	COMPLICATED PEPTIC ULCER	0.9927	0.9831	-1.0
177	6	MED	UNCOMPLICATED PEPTIC ULCER WITH CC	0.7733	0.7637	-1.2
178	6	MED	UNCOMPLICATED PEPTIC ULCER W/O CC	0.5684	0.5650	-0.6
179	6	MED	INFLAMMATORY BOWEL DISEASE	1.0929	1.0648	-2.6
180	6	MED	G.I. OBSTRUCTION WITH CC	0.9165	0.9134	-0.3
181	6	MED	G.I. OBSTRUCTION W/O CC	0.5340	0.5229	-2.1
182	6	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 WITH CC	0.7386	0.7414	0.4
183	6	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 W/O CC	0.5284	0.5215	-1.3
184	6	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE 0-17	0.6446	0.5408	-16.1
185	6	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE >17	0.7488	0.7627	1.9
186	6	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE 0-17	0.4112	0.4062	-1.2
187	6	MED	DENTAL EXTRACTIONS & RESTORATIONS	0.4579	0.4856	6.0
188	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 WITH CC	0.9575	0.9730	1.6
189	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 W/O CC	0.4872	0.4767	-2.2
190	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17	0.7933	0.7671	-3.3
191	7	SURG	PANCREAS, LIVER & SHUNT PROCEDURES W CC	5.3135	5.0674	-4.6
192	7	SURG	PANCREAS, LIVER & SHUNT PROCEDURES W/O CC	2.4801	2.1816	-12.0
193	7	SURG	BILIARY TRACT PROC W CC EXCEPT ONLY TOT CHOLECYST W OR W/O C.D.E.	3.0566	3.0026	-1.8
194	7	SURG	BILIARY TRACT PROC W/O CC EXCEPT ONLY TOT CHOLECYST W OR W/O C.D.E.	1.8809	1.7802	-5.4
195	7	SURG	TOTAL CHOLECYSTECTOMY W C.D.E. WITH CC	2.3363	2.2810	-2.4
196	7	SURG	TOTAL CHOLECYSTECTOMY W C.D.E. W/O CC	1.5628	1.5106	-3.3
197	7	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. WITH CC	1.7757	1.7378	-2.1
198	7	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. W/O CC	1.0456	0.9865	-5.7
199	7	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY	2.2894	2.2585	-1.3
200	7	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY	2.6844	2.7160	1.2
201	7	SURG	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES	2.4875	2.4093	-3.1
202	7	MED	CIRRHOSIS & ALCOHOLIC HEPATITIS	1.2400	1.1953	-3.6
203	7	MED	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS	1.0904	1.1174	2.5
204	7	MED	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	1.0266	1.0387	1.2
205	7	MED	DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA WITH CC	1.2386	1.2068	-2.6
206	7	MED	DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W/O CC	0.6406	0.6124	-4.4
207	7	MED	DISORDERS OF THE BILIARY TRACT WITH CC	0.9574	0.9566	-0.1
208	7	MED	DISORDERS OF THE BILIARY TRACT W/O CC	0.5798	0.5658	-2.4
209	8	SURG	MAJOR JOINT & LIMB REATTACHMENT PROCEDURES	2.3829	2.3437	-1.6
210	8	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 WITH CC	2.1237	2.0536	-3.3

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
211	8	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 W/O CC	1.5418	1.4716	-4.6
212	8	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17	1.4611	1.4023	-4.0
213	8	SURG	AMPUTATION FOR MUSCULOSKELETAL SYSTEM & CONN TISSUE DISORDERS	1.7667	1.7701	0.2
214	8	SURG	BACK & NECK PROCEDURES WITH CC	2.0618	1.9997	-3.0
215	8	SURG	BACK & NECK PROCEDURES W/O CC	1.3053	1.2155	-6.9
216	8	SURG	BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	1.6331	1.7852	9.3
217	8	SURG	WND DEBRID & SKIN GRAFT EXCEPT HAND, FOR MUSCSKELET & CONN TISS DIS	2.9985	3.0640	2.2
218	8	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR AGE >17 WITH CC	1.5637	1.5359	-1.8
219	8	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR AGE >17 W/O CC	0.9848	0.9363	-4.9
220	8	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR AGE 0-17	0.9242	0.9130	-1.2
221	8	SURG	KNEE PROCEDURES WITH CC	1.5164	1.5408	1.6
222	8	SURG	KNEE PROCEDURES W/O CC	0.8259	0.8855	7.2
223	8	SURG	MAJOR SHOULDER/ELBOW PROC, OR OTHER UPPER EXTREMITY PROC WITH CC	1.0621	0.8405	-20.9
224	8	SURG	SHOULDER, ELBOW OR FOREARM PROC, EXC MAJOR JOINT PROC W/O CC	0.6378	0.6248	-2.0
225	8	SURG	FOOT PROCEDURES	0.6972	0.7063	1.3
226	8	SURG	SOFT TISSUE PROCEDURES WITH CC	1.3916	1.4308	2.8
227	8	SURG	SOFT TISSUE PROCEDURES W/O CC	0.6656	0.6613	-0.6
228	8	SURG	MAJOR THUMB OR JOINT PROC, OR OTHER HAND OR WRIST PROC WITH CC	0.8098	0.7911	-2.3
229	8	SURG	HAND OR WRIST PROC EXCEPT MAJOR JOINT PROC W/O CC	0.5153	0.5117	-0.7
230	8	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES OF HIP & FEMUR	0.8502	0.8763	3.1
231	8	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES EXCEPT HIP & FEMURE	0.8773	0.9107	3.8
232	8	SURG	ARTHROSCOPY	0.9593	1.1229	17.1
233	8	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC WITH CC	1.6745	1.7280	3.2
234	8	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W/O CC	0.8595	0.8477	-1.4
235	8	MED	FRACTURES OF FEMUR	1.1956	1.1575	-3.2
236	8	MED	FRACTURES OF HIP & PELVIS	0.8869	0.8565	-3.4
237	8	MED	SPRAINS, STRAINS & DISLOCATIONS OF HIP, PELVIS & THIGH	0.5724	0.5662	-1.1
238	8	MED	OSTEOMYELITIS	1.6503	1.5778	-4.4
239	8	MED	PATHOLOGICAL FRACTURES & MUSCULOSKELETAL & CONN TISS MALIGNANCY	0.9787	0.9843	0.6
240	8	MED	CONNECTIVE TISSUE DISORDERS WITH CC	1.1186	1.0769	-3.7
241	8	MED	CONNECTIVE TISSUE DISORDERS W/O CC	0.6354	0.6218	-2.1
242	8	MED	SEPTIC ARTHRITIS	1.3247	1.3229	-0.1
243	8	MED	MEDICAL BACK PROBLEMS	0.6560	0.6501	-0.9
244	8	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES WITH CC	0.7181	0.7134	-0.7
245	8	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES W/O CC	0.5214	0.5108	-2.0

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
246	8	MED	NON-SPECIFIC ARTHROPATHIES	0.5672	0.5910	4.2
247	8	MED	SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE	0.5365	0.5285	-1.5
248	8	MED	TENDONITIS, MYOSITIS & BURSITIS	0.6176	0.6120	-0.9
249	8	MED	AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	0.6678	0.6287	-5.9
250	8	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 WITH CC	0.6679	0.6806	1.9
251	8	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 W/O CC	0.4203	0.4230	0.6
252	8	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE 0-17	0.3496	0.3454	-1.2
253	8	MED	FX, SPRN, STRN & DISL OF UPARM, LOWLEG EX FOOT AGE >17 WITH CC	0.7831	0.7983	1.9
254	8	MED	FX, SPRN, STRN & DISL OF UPARM, LOWLEG EX FOOT AGE >17 W/O CC	0.4426	0.4346	-1.8
255	8	MED	FX, SPRN, STRN & DISL OF UPARM, LOWLEG EX FOOT AGE 0-17	0.4638	0.4582	-1.2
256	8	MED	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	0.6419	0.6251	-2.6
257	9	SURG	TOTAL MASTECTOMY FOR MALIGNANCY WITH CC	0.9893	0.9402	-5.0
258	9	SURG	TOTAL MASTECTOMY FOR MALIGNANCY W/O CC	0.7915	0.7467	-5.7
259	9	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY WITH CC	0.9873	0.9987	1.2
260	9	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY W/O CC	0.6023	0.5654	-6.1
261	9	SURG	BREAST PROC FOR NON-MALIGNANCY EXCEPT BIOPSY & LOCAL EXCISION	0.6377	0.6285	-1.4
262	9	SURG	BREAST BIOPSY & LOCAL EXCISION FOR NON-MALIGNANCY	0.4375	0.4464	2.0
263	9	SURG	SKIN GRAFT &/OR DEBRID FOR SKIN ULCER OR CELLULITIS WITH CC	2.7018	2.6691	-1.2
264	9	SURG	SKIN GRAFT &/OR DEBRID FOR SKIN ULCER OR CELLULITIS W/O CC	1.5881	1.4197	-10.6
265	9	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS W CC	1.4303	1.3903	-2.8
266	9	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS W/O	0.6895	0.6867	-0.4
267	9	SURG	PERIANAL & PILONIDAL PROCEDURES	0.6068	0.5738	-5.4
268	9	SURG	SKIN, SUBCUTANEOUS TISSUE & BREAST PLASTIC PROCEDURES	0.6173	0.6431	4.2
269	9	SURG	OTHER SKIN, SUBCUT TISS & BREAST PROC WITH CC	1.6854	1.7287	2.6
270	9	SURG	OTHER SKIN, SUBCUT TISS & BREAST PROC W/O CC	0.6966	0.6744	-3.2
271	9	MED	SKIN ULCERS	1.2174	1.1808	-3.0
272	9	MED	MAJOR SKIN DISORDERS WITH CC	1.0366	1.0183	-1.8
273	9	MED	MAJOR SKIN DISORDERS W/O CC	0.7079	0.6811	-3.8
274	9	MED	MALIGNANT BREAST DISORDERS WITH CC	1.0508	1.0610	1.0
275	9	MED	MALIGNANT BREAST DISORDERS W/O CC	0.5735	0.5793	1.0
276	9	MED	NON-MALIGNANT BREAST DISORDERS	0.5320	0.5602	5.3
277	9	MED	CELLULITIS AGE >17 WITH CC	0.9624	0.9392	-2.4
278	9	MED	CELLULITIS AGE >17 W/O CC	0.6829	0.6492	-4.9
279	9	MED	CELLULITIS AGE 0-17	0.7367	0.7278	-1.2
280	9	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE >17 WITH CC	0.6403	0.6597	3.0

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
281	9	MED	TRAUMA TO THE SKIN SUBCUT TISS & BREAST AGE >17 W/O CC	0.4249	0.4233	-0.4
282	9	MED	TRAUMA TO THE SKIN SUBCUT TISS & BREAST AGE 0-17	0.3424	0.3383	-1.2
283	9	MED	MINOR SKIN DISORDERS WITH CC	0.7760	0.7624	-1.8
284	9	MED	MINOR SKIN DISORDERS W/O CC	0.4839	0.4659	-3.7
285	10	SURG	AMPUTAT OF LOWER LIMB FOR ENDOC, NUTRIT & METABOL DISORDERS	3.0283	2.8191	-6.9
286	10	SURG	ADRENAL & PITUITARY PROCEDURES	2.5944	2.5261	-2.6
287	10	SURG	SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METABOL DISORDERS	2.2201	2.2372	0.8
288	10	SURG	O.R. PROCEDURES FOR OBESITY	2.0873	1.8656	-10.6
289	10	SURG	PARATHYROID PROCEDURES	1.0952	1.0587	-3.3
290	10	SURG	THYROID PROCEDURES	0.8046	0.7805	-3.0
291	10	SURG	THYROGLOSSAL PROCEDURES	0.5103	0.4589	-10.1
292	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC WITH CC	2.7120	2.7779	2.4
293	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC	1.1954	1.1289	-5.6
294	10	MED	DIABETES AGE >35	0.7587	0.7509	-1.0
295	10	MED	DIABETES AGE 0-35	0.7713	0.7252	-6.0
296	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 WITH CC	0.9396	0.9404	0.1
297	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 W/O CC	0.5728	0.5480	-4.3
298	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE 0-17	0.6434	0.6768	5.2
299	10	MED	INBORN ERRORS OF METABOLISM	0.8451	0.8623	2.0
300	10	MED	ENDOCRINE DISORDERS WITH CC	1.1179	1.1086	-0.8
301	10	MED	ENDOCRINE DISORDERS W/O CC	0.6420	0.6250	-2.6
302	11	SURG	KIDNEY TRANSPLANT	3.7012	3.7905	2.4
303	11	SURG	KIDNEY, URETER & MAJOR BLADDER PROCEDURES FOR NEOPLASM	2.7491	2.6773	-2.6
304	11	SURG	KIDNEY, URETER & MAJOR BLADDER PROC FOR NON-NEOPL WITH CC	2.4603	2.4944	1.4
305	11	SURG	KIDNEY, URETER & MAJOR BLADDER PROC FOR NON-NEOPL W/O CC	1.3334	1.2807	-4.0
306	11	SURG	PROSTATECTOMY WITH CC	1.4321	1.4060	-1.8
307	11	SURG	PROSTATECTOMY W/O CC	0.8634	0.7931	-8.1
308	11	SURG	MINOR BLADDER PROCEDURES WITH CC	1.5480	1.5067	-2.7
309	11	SURG	MINOR BLADDER PROCEDURES W/O CC	0.8343	0.7882	-5.5
310	11	SURG	TRANSURETHRAL PROCEDURES WITH CC	0.9112	0.9014	-1.1
311	11	SURG	TRANSURETHRAL PROCEDURES W/O CC	0.5434	0.5211	-4.1
312	11	SURG	URETHRAL PROCEDURES, AGE >17 WITH CC	0.8282	0.8071	-2.5
313	11	SURG	URETHRAL PROCEDURES, AGE >17 W/O CC	0.5054	0.4757	-5.9
314	11	SURG	URETHRAL PROCEDURES, AGE 0-17	0.4323	0.4271	-1.2
315	11	SURG	OTHER KIDNEY & URINARY TRACT O.R. PROCEDURES	2.4142	2.3366	-3.2

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
316	11	MED	RENAL FAILURE	1.2811	1.2688	-1.0
317	11	MED	ADMIT FOR RENAL DIALYSIS	0.3494	0.3814	9.2
318	11	MED	KIDNEY & URINARY TRACT NEOPLASMS WITH CC	1.0683	1.0637	-0.4
319	11	MED	KIDNEY & URINARY TRACT NEOPLASMS W/O CC	0.5777	0.5453	-5.6
320	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 WITH CC	1.0427	1.0261	-1.6
321	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 W/O CC	0.7247	0.6830	-5.8
322	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE 0-17	0.7487	0.7006	-6.4
323	11	MED	URINARY STONES WITH CC &/OR ESW LITHOTRIPSY	0.7915	0.7726	-2.4
324	11	MED	URINARY STONE W/O CC	0.4034	0.3964	-1.7
325	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 WITH CC	0.6833	0.6673	-2.3
326	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 W/O CC	0.4357	0.4276	-1.9
327	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE 0-17	0.5511	0.5444	-1.2
328	11	MED	URETHRAL STRICTURE AGE >17 WITH CC	0.6200	0.6445	4.0
329	11	MED	URETHRAL STRICTURE AGE >17 W/O CC	0.4227	0.4020	-4.9
330	11	MED	URETHRAL STRICTURE AGE 0-17	0.2788	0.2754	-1.2
331	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 WITH CC	0.9143	0.9501	3.9
332	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 W/O CC	0.5636	0.5557	-1.4
333	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE 0-17	0.6645	0.8884	33.7
334	12	SURG	MAJOR MALE PELVIC PROCEDURES WITH CC	1.8513	1.8224	-1.6
335	12	SURG	MAJOR MALE PELVIC PROCEDURES W/O CC	1.3617	1.3462	-1.1
336	12	SURG	TRANSURETHRAL PROSTATECTOMY WITH CC	1.0162	0.9827	-3.3
337	12	SURG	TRANSURETHRAL PROSTATECTOMY W/O CC	0.6950	0.6603	-5.0
338	12	SURG	TESTES PROCEDURES, FOR MALIGNANCY	0.7524	0.7604	1.1
339	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE >17	0.5867	0.5847	-0.3
340	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE 0-17	0.4335	0.4283	-1.2
341	12	SURG	PENIS PROCEDURES	0.9828	0.9851	0.2
342	12	SURG	CIRCUMCISION AGE >17	0.4489	0.4806	7.1
343	12	SURG	CIRCUMCISION AGE 0-17	0.3788	0.3742	-1.2
344	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANCY	1.0815	1.0569	-2.3
345	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIGNANCY	0.7907	0.7877	-0.4
346	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM WITH CC	0.9178	0.9214	0.4
347	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM W/O CC	0.4833	0.4664	-3.5
348	12	MED	BENIGN PROSTATIC HYPERTROPHY WITH CC	0.6717	0.6635	-1.2
349	12	MED	BENIGN PROSTATIC HYPERTROPHY W/O CC	0.3870	0.3828	-1.1
350	12	MED	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM	0.6780	0.6716	-0.9

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
351	12	MED	STERILIZATION, MALE	0.3333	0.3293	-1.2
352	12	MED	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	0.5360	0.5500	2.6
353	13	SURG	PELVIC EVISCERATION, RADICAL HYSTERECTOMY & RADICAL VULVECTOMY	2.2704	2.0645	-9.1
354	13	SURG	UTERINE, ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG WITH CC	1.4985	1.4248	-4.9
355	13	SURG	UTERINE, ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W/O CC	0.9453	0.8943	-5.4
356	13	SURG	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	0.7596	0.7291	-4.0
357	13	SURG	UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIG	2.2107	2.1705	-1.8
358	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY WITH CC	1.2466	1.2032	-3.5
359	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W/O CC	0.8525	0.8132	-4.6
360	13	SURG	VAGINA, CERVIX & VULVA PROCEDURES	0.7439	0.7760	4.3
361	13	SURG	LAPAROSCOPY & INCISIONAL TUBAL INTERRUPTION	0.7185	0.6859	-4.5
362	13	SURG	ENDOSCOPIC TUBAL INTERRUPTION	0.3701	0.3490	-5.7
363	13	SURG	D&C, CONIZATION & RADIO-IMPLANT, FOR MALIGNANCY	0.6828	0.6987	2.3
364	13	SURG	D&C, CONIZATION EXCEPT FOR MALIGNANCY	0.4411	0.4669	5.8
365	13	SURG	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES	1.9412	1.8928	-2.5
366	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM WITH CC	1.1233	1.1726	4.4
367	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC	0.5110	0.4896	-4.2
368	13	MED	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM	0.8683	0.8927	2.8
369	13	MED	MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	0.5058	0.5109	1.0
370	14	SURG	CESAREAN SECTION WITH CC	0.9456	0.9848	4.1
371	14	SURG	CESAREAN SECTION W/O CC	0.7099	0.6544	-7.8
372	14	MED	VAGINAL DELIVERY W COMPLICATING DIAGNOSES	0.4442	0.4540	2.2
373	14	MED	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	0.3099	0.2987	-3.6
374	14	SURG	VAGINAL DELIVERY W STERILIZATION &/OR D&C	0.5542	0.4981	-10.1
375	14	SURG	VAGINAL DELIVERY W O.R. PROC EXCEPT STERIL &/OR D&C	0.6817	0.6735	-1.2
376	14	MED	POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE	0.3887	0.3502	-9.9
377	14	SURG	POSTPARTUM & POST ABORTION DIAGNOSES W O.R. PROCEDURE	0.6574	1.5119	130.0
378	14	MED	ECTOPIC PREGNANCY	0.7938	0.7232	-8.9
379	14	MED	THREATENED ABORTION	0.2956	0.2493	-15.7
380	14	MED	ABORTION W/O D&C	0.2531	0.2644	4.5
381	14	MED	ABORTION W D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	0.3872	0.3769	-2.7
382	14	MED	FALSE LABOR	0.1242	0.1186	-4.5
383	14	MED	OTHER ANTEPARTUM DIAGNOSES W MEDICAL COMPLICATIONS	0.4416	0.3759	-14.9
384	14	MED	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS	0.3200	0.3279	2.5
385	15		NEONATES, DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	1.2232	1.2084	-1.2

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
386	15		EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	3.6480	3.6039	-1.2
387	15		PREMATURITY W MAJOR PROBLEMS	1.8267	1.8046	-1.2
388	15		PREMATURITY W/O MAJOR PROBLEMS	1.1571	1.1431	-1.2
389	15		FULL TERM NEONATE W MAJOR PROBLEMS	1.7896	2.4098	34.7
390	15		NEONATE W OTHER SIGNIFICANT PROBLEMS	1.1117	0.8111	-27.0
391	15		NORMAL NEWBORN	0.2218	0.2191	-1.2
392	16	SURG	SPLENECTOMY AGE >17	3.6972	3.5891	-2.9
393	16	SURG	SPLENECTOMY AGE 0-17	1.5206	1.5022	-1.2
394	16	SURG	OTHER O.R. PROCEDURES OF THE BLOOD AND BLOOD FORMING ORGANS	1.4618	1.5355	5.0
395	16	MED	RED BLOOD CELL DISORDERS AGE >17	0.7427	0.7466	0.5
396	16	MED	RED BLOOD CELL DISORDERS AGE 0-17	0.4539	0.3575	-21.2
397	16	MED	COAGULATION DISORDERS	1.0426	1.0955	5.1
398	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS WITH CC	1.2472	1.2279	-1.5
399	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC	0.6899	0.6906	0.1
400	17	SURG	LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCUDURE	2.7513	2.6981	-1.9
401	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC WITH CC	2.1688	2.2572	4.1
402	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W/O CC	0.9001	0.8945	-0.6
403	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA WITH CC	1.5824	1.6044	1.4
404	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC	0.8024	0.7753	-3.4
405	17	MED	ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE 0-17	1.0407	1.0281	-1.2
406	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC WITH CC	2.7843	2.7445	-1.4
407	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W/O CC	1.4537	1.3042	-10.3
408	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R. PROC	0.9274	0.9592	3.4
409	17	MED	RADIOTHERAPY	1.0473	1.0357	-1.1
410	17	MED	CHEMOTHERAPY	0.4811	0.4890	1.6
411	17	MED	HISTORY OF MALIGNANCY W/O ENDOSCOPY	0.4733	0.4543	-4.0
412	17	MED	HISTORY OF MALIGNANCY W ENDOSCOPY	0.4334	0.4046	-6.6
413	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG WITH CC	1.2412	1.2853	3.6
414	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC	0.7876	0.7557	-4.1
415	18	SURG	O.R. PROCEDURE FOR INFECTIOUS & PARASITIC DISEASES	3.5992	3.6424	1.2
416	18	MED	SEPTECEMIA AGE >17	1.5896	1.5346	-3.5
417	18	MED	SEPTECEMIA AGE 0-17	1.0354	0.8929	-13.8
418	18	MED	POSTOPERATIVE & POST-TRAUMATIC INFECTIONS	1.0188	0.9641	-5.4
419	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 WITH CC	0.9654	0.9552	-1.1
420	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 W/O CC	0.6760	0.6805	0.7

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
421	18	MED	VIRAL ILLNESS AGE >17	0.6529	0.6337	-2.9
422	18	MED	VIRAL ILLNESS & FEVER OF UNKNOWN ORIGIN AGE 0-17	0.7780	0.5874	-24.5
423	18	MED	OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES	1.6059	1.5845	-1.3
424	19	SURG	O.R. PROCEDURE W PRINICIPAL DIAGNOSES OF MENTAL ILLNESS	2.2865	2.3418	2.4
425	19	MED	ACUTE ADJUST REACT & DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION	0.6215	0.6470	4.1
426	19	MED	DEPRESSIVE NEUROSES	0.6286	0.6255	-0.5
427	19	MED	NEUROSES EXCEPT DEPRESSIVE	0.5994	0.6133	2.3
428	19	MED	DISORDERS OF PERSONALITY & IMPULSE CONTROL	0.7351	0.7325	-0.4
429	19	MED	ORGANIC DISTURBANCES & MENTAL RETARDATION	0.8932	0.9016	0.9
430	19	MED	PSYCHOSES	0.9089	0.8957	-1.5
431	19	MED	CHILDHOOD MENTAL DISORDERS	0.7028	0.6347	-9.7
432	19	MED	OTHER MENTAL DISORDER DIAGNOSES	0.7004	0.7329	4.6
433	20		ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA	0.4110	0.3974	-3.3
434	20		ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT WITH CC	0.8095	0.7886	-2.6
435	20		ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT W/O CC	0.5738	0.5510	-4.0
436	20		ALC/DRUG DEPENDENCE W REHABILITATION THERAPY	1.0164	0.9873	-2.9
437	20		ALC/DRUG DEPENDENCE, COMBINED REHAB & DETOX THERAPY	1.2760	1.2005	-5.9
438	20		NO LONGER VALID	0.0000	0.0000	NA
439	21	SURG	SKIN GRAFTS FOR INJURIES	1.7151	1.6731	-2.4
440	21	SURG	WOUND DEBRIDEMENTS FOR INJURIES	2.4994	2.4992	-0.0
441	21	SURG	HAND PROCEDURES FOR INJURIES	0.7038	0.7381	4.9
442	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES WITH CC	1.9165	1.8642	-2.7
443	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES W/O CC	1.1903	1.1906	0.0
444	21	MED	MULTIPLE TRAUMA AGE >17 WITH CC	0.7824	0.7594	-2.9
445	21	MED	MULTIPLE TRAUMA AGE >17 W/O CC	0.5207	0.4950	-4.9
446	21	MED	MULTIPLE TRAUMA AGE 0-17	0.4796	0.4738	-1.2
447	21	MED	ALLERGIC REACTIONS AGE >17	0.4734	0.4702	-0.7
448	21	MED	ALLERGIC REACTIONS AGE 0-17	0.3470	0.3428	-1.2
449	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 WITH CC	0.8077	0.7983	-1.2
450	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 W/O CC	0.4800	0.4648	-3.2
451	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE 0-17	0.4819	0.3947	-18.1
452	21	MED	COMPLICATIONS OF TREATMENT WITH CC	0.9455	0.8932	-5.5
453	21	MED	COMPLICATIONS OF TREATMENT W/O CC	0.5064	0.4725	-6.7
454	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG WITH CC	0.8993	0.9104	1.2
455	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG W/O CC	0.4405	0.4226	-4.1

Appendix C. Change in DRG Relative Weights from Fiscal Year 1989 to Fiscal Year 1990.

DRG	MDC	TYPE	TITLE	FY89 WEIGHT	FY90 WEIGHT	PERCENT CHANGE
456	22		BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	1.5827	3.1114	96.6
457	22	MED	EXTENSIVE BURNS W/O O.R. PROCEDURE	2.6766	1.8725	-30.0
458	22	SURG	NON-EXTENSIVE BURNS W SKIN GRAFT	4.0349	3.8130	-5.5
459	22	SURG	NON-EXTENSIVE BURNS W WOUND DEBRIDEMENT OR OTHER O.R. PROC	2.0305	1.9164	-5.6
460	22	MED	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE	1.0193	1.0165	-0.3
461	23	SURG	O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES	0.7333	0.7762	5.9
462	23	MED	REHABILITATION	1.8085	1.9047	5.3
463	23	MED	SIGNS & SYMPTOMS WITH CC	0.7692	0.7540	-2.0
464	23	MED	SIGNS & SYMPTOMS W/O CC	0.4831	0.4719	-2.3
465	23	MED	AFTERCARE W HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	0.3436	0.3282	-4.5
466	23	MED	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	0.5566	0.5463	-1.9
467	23	MED	OTHER FACTORS INFLUENCING HEALTH STATUS	0.4461	0.4339	-2.7
468			EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	3.3045	3.3150	0.3
469			PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS	0.0000	0.0000	NA
470			UNGROUPABLE	0.0000	0.0000	NA
471	8	SURG	BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY	4.1503	3.9672	-4.4
472	22	SURG	EXTENSIVE BURNS W O.R. PROCEDURE	12.2265	12.7129	4.0
473	17		ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE >17	2.9296	3.0963	5.7
474	4		RESPIRATORY SYSTEM DIAGNOSIS WITH TRACHEOSTOMY	12.3838	13.4688	8.8
475	4	MED	RESPIRATORY SYSTEM DIAGNOSIS WITH VENTILATOR SUPPORT	3.1437	3.6290	15.4
476			PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	2.2225	2.2425	0.9
477			NON-EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	1.3763	1.4318	4.0

APPENDIX D

BIOGRAPHICAL SKETCHES OF COMMISSIONERS

Stuart H. Altman, Chairman

Stuart H. Altman, dean of the Florence Heller Graduate School for Social Policy, Brandeis University, and Sol C. Chaikin Professor of National Health Policy, is an economist whose research interests are primarily in the area of Federal health policy. He has been at Brandeis since 1977. Between 1971 and 1976, Dean Altman was deputy assistant secretary for planning and evaluation/health at the Department of Health, Education and Welfare (now the Department of Health and Human Services). In that position, he was one of the primary contributors to the development and advancement of the National Health Insurance proposal. From 1973 to 1974, he also served as the deputy director for health of the President's Cost of Living Council, where he was responsible for developing the council's program on health care cost-containment. Formerly, Dean Altman taught at Brown University and at the University of California (Berkeley). He is a member of the Institute of Medicine of the National Academy of Sciences and former member of its governing council; on the board of Beth Israel Hospital (Boston); chairman of the board of the Health Policy Center at Brandeis; and president of the National Foundation for Health Services Research. He is a past president of the National Association for Health Services Research and former board member of the Robert Wood Johnson Clinical Scholars Program. Dean Altman also served on the President's Commission for a National Agenda for the Eighties. A member of several editorial boards, he has published extensively on various aspects of health care and public policy. His publications include: the Arthur Weissman Memorial Lecture, "Will the Medicare Prospective Payment System Succeed? Technical Adjustments Can Make the Difference"; *Federal Health Policy: Problems and Prospects*, with Harvey M. Sapolsky; *Ambulatory Care: Problems of Cost and Access*, with Joanna Lion and Judith LaVor Williams; "Financing Hospital Care: An Uncertain Future," *Journal of Health Administration and Education,* Winter, Vol. 3, No. 1, 1985; "The Impact of Cost Shifting on the Health Care System," in *Health Care Commentary,* Health Insurance Association of America; and "The Growing Physician Surplus: Will It Bankrupt or Benefit the U.S. Health System?" in *In Search of a Public Policy*, edited by Eli Ginzberg and Miriam Ostow. Dean Altman received both an M.S. and a Ph.D. in economics from the University of California (Los Angeles).

Richard A. Berman

Richard A. Berman is special consultant to McKinsey & Company, Inc. in New York, a position he has held since 1987. In addition, he serves several organizations, including the executive committee of the New York City Public Development Corporation, the New York State Council on Health Care Financing, and the National Advisory Council for the Center for Hospital Finance and Management at The Johns Hopkins University.

Previously, he was a management consultant and a candidate in the Democratic primary in the 20th Congressional District. Mr. Berman was the executive vice president of New York University Medical Center from 1983 to 1986. At that time he was also a professor in health care management at the School of Medicine. Mr. Berman worked for New York State from 1977 to 1983, first as director of the Office of Health Systems Management and later as the commissioner of the Division of Housing and Community Renewal. Before that, he was assistant dean of Cornell University Medical School, as well as associate director for ambulatory services at the New York Hospital, clinical assistant professor in the Departments of Medicine and Public Health at Cornell University Medical School, and senior program consultant and program director for The Robert Wood Johnson Foundation. Prior to these positions, Mr. Berman was special assistant for policy development, Office of the Assistant Secretary for Health, Department of Health, Education and Welfare. He also served in the Office of Health in the Economic Stabilization Program, the University of Utah Hospital, and the U.S. Public Health Service. Mr. Berman received B.A., M.B.A., and M.H.A. degrees from the University of Michigan.

Harold A. Cohen*

Harold A. Cohen is a health services consultant and a lecturer in the Department of Health Care Organization of The Johns Hopkins University. He has been with the university since 1972. From 1972 to 1987, he was the executive director of the Health Services Cost Review Commission of the state of Maryland. Before that, he was on the economics faculty of the University of Georgia. Dr. Cohen has been a leader in the development and administration of state-level cost review and rate-setting efforts. He is a member of the American Economic Association, the Southern Economic Association, the Western Economic Association, the American Public Health Association, and the Health Economic Research Organization. Dr. Cohen is the author of numerous professional publications, including "The Financing of Coronary Artery Bypass Surgery," *Circulation,* November 1982; "Case Mix and Regulation," in *Topics in Health Care Financing: Diagnostic Related Groups*, Summer 1982; "Evaluating the Cost of Technology," in *Health Care in the 1980s*, 1979; "Controlling Medicaid Expenditures by General Price Controls," in *The Medicaid Crisis: What States Can Do in the 1980s*, 1982; and "A Model for Resolving Planning Rate Setting Conflict," with Carl J. Schramm, Ph.D., L.D., in *A New Approach to the Economics of Health Care*, 1982. He holds an M.A. and a Ph.D. in economics from Cornell University, and received a bachelor's degree from Harpur College (now the State University of New York at Binghamton).

Curtis C. Erickson

Curtis C. Erickson is president and chief executive officer of Great Plains Health Alliance, Inc., a post he has held since 1959. He was that organization's assistant director from 1955 to 1959. Having served the American Hospital Association (AHA) in many capacities, he became chairman of Regional Advisory Board 6 and a trustee in 1987. He has also chaired AHA's advisory panel to the Center for Small or Rural Hospitals and has been a member of the Council on Management, the Council on Federal Relations, and a representative to

the House of Delegates. President of the Lutheran Hospital Association of America from 1974 to 1975, Mr. Erickson was also on the board of trustees from 1972 to 1982. He was president of the Kansas Hospital Association from 1965 to 1966, a member of the board of governors of the Healthcare Stabilization Fund for the Kansas Department of Insurance, and past district governor of Rotary International. From 1983 to 1986, Mr. Erickson served on the Robert Wood Johnson Foundation's National Advisory Committee for the Rural Hospital Program of Extended Care Services. Mr. Erickson is a member of the American College of Healthcare Executives. From 1951 to 1955, he served in the U.S. Air Force. He received a B.S. in business administration from Fort Hays Kansas State University in 1951.

William D. Fullerton

William D. Fullerton is an adjunct professor in the School of Medicine, University of North Carolina at Chapel Hill. From 1978 to 1984, he was principal and president of Health Policy Alternatives, Inc., where he is now a part-time consultant. The first deputy administrator of the Health Care Financing Administration (1977-78), Mr. Fullerton was also a special consultant to the Secretary of the Department of Health, Education and Welfare. He served as chief of the professional health staff, Committee on Ways and Means, U.S. House of Representatives, from 1970 to 1976. Mr. Fullerton was the first executive secretary of the Health Insurance Benefits Advisory Council in 1965-66. Before that, he held various positions in the Social Security Administration. He is a member of the Institute of Medicine of the National Academy of Sciences. Mr. Fullerton received a B.A. from the University of Rochester.

William S. Hoffman

William S. Hoffman has been director of the Social Security Department of the International Union of the United Auto Workers since 1984. Previously, he was the assistant director and a consultant to the department. Mr. Hoffman is also director of the Michigan Health and Social Security Research Institute, Inc., where from 1973 to 1980 he was a senior research associate. An active participant in national and state health care issues, Mr. Hoffman has served on the Michigan Certificate of Need Commission, the Department of Health and Human Services' Council on Graduate Medical Education, the Department of Labor's Advisory Council on Employee Welfare and Pension Benefit Plans, the Governor's Task Force on Access to Health Care in Michigan, and the Institute of Medicine of the National Academy of Sciences. He served in various research and teaching capacities with the Social Science Research Center at Mercy College of Detroit, the Department of Sociology at Wayne State University, the Detroit Residential Manpower Center, the Boys Republic, and the Merrill Palmer Institute. Mr. Hoffman has written and spoken extensively on such issues as the use of prepaid mental health care services and organized labor's perspective on current health care issues and legislation. He received a bachelor's degree in psychology from Otterbein College and his M.A. and Ph.D. degrees in sociology from Wayne State University.

B. Kristine Johnson

B. Kristine Johnson is vice president, corporate affairs and a member of the senior management council of Medtronic, Inc. Joining the company in 1982 as director of public affairs, she subsequently served as vice president, public affairs and vice president, U.S. national accounts/customer marketing. She assumed her post in 1987. Prior to that, Ms. Johnson was an executive of Cargill, Inc. She is a former chair of the health care financing committee and government affairs section of the Health Industry Manufacturers Association (HIMA). A member of the University of Minnesota Hospital board, Ms. Johnson chairs its planning and development committee. She received a B.A. from Saint Olaf College and served on the college's board of regents from 1973 to 1986.

Sheldon S. King

Sheldon S. King is president of Cedars-Sinai Medical Center in Los Angeles, California. He was president of Stanford University Hospital and a clinical associate professor in the Department of Community, Family, and Preventive Medicine at Stanford's School of Medicine from 1986 to 1989. From 1981 to 1985, Mr. King served simultaneously as the hospital's executive vice president and director as well as the university's associate vice president for medical affairs. He was also director of hospitals and clinics, University Hospital, University of California Medical Center, from 1972 to 1981. He was executive director of the Albert Einstein College of Medicine from 1968 to 1972, and held various positions at Mount Sinai Hospital from 1957 to 1968. Mr. King was chairman of the administrative board of the Council of Teaching Hospitals of the Association of American Medical Colleges. Besides serving in the House of Delegates of the American Hospital Association, he is chairman of the advisory board of the American Board of Internal Medicine. He is a member of the Institute of Medicine of the National Academy of Sciences. Mr. King is a Fellow of the American College of Health Care Executives, the American Public Health Association, and the Royal Society of Health. His publications include the "Impact of Competition and Cost Containment in the University Hospital," *American Journal of Cardiology*, August 1985. Mr. King received an A.B. from New York University and an M.S. from Yale University.

Larry L. Mathis

Larry L. Mathis is president and chief executive officer of the Methodist Hospital Health Care System in Houston, Texas. This system includes 12 member corporations and the Methodist Hospital. He has held this position since 1983. Before that, Mr. Mathis held various offices at the Methodist Hospital in Houston. Mr. Mathis is a member of the board of trustees of the American Hospital Association and has been elected to serve on its executive committee. He was the chairman of the Texas Hospital Association, and Regent for Texas in the American College of Healthcare Executives. In addition, Mr. Mathis served as a member of the administrative board of the Association of American Medical Colleges' Council of Teaching Hospitals, and as chairman of the National Advisory

Council on Health Care Technology Assessment from 1985 to 1988. He was a consultant to the Ministry of Education and Health in Brazil. Mr. Mathis served in the U.S. Army from 1965 to 1970. He received a B.A. in social sciences from Pittsburgh State University in Kansas and an M.H.A. from Washington University.

Barbara J. McNeil

Barbara J. McNeil is professor and head of the Department of Health Care Policy at Harvard Medical School and professor of radiology at Brigham and Women's Hospital. She is also director of the Center for Cost-Effective Care, Brigham and Women's Hospital. Dr. McNeil is a member of the Harvard-MIT Division of Health Sciences and Technology. Her professional and advisory activities are extensive. She serves on the board of trustees of the Society for Medical Decision Making. Dr. McNeil is a member of the joint committee of the American College of Radiology, the Association of University Radiologists, and the Society of Chairmen of Academic Radiology. She is also a member of the Fleischner Society, the Institute of Medicine of the National Academy of Sciences, and the National Council on Radiation Protection and Measurements. She serves on the American College of Radiology's committees on nuclear radiology and on quality assurance and efficacy. Formerly, Dr. McNeil was on the board of the Association for Health Services Research, the policy council of the Association for Public Policy Analysis and Management, and a member of the National Council on Health Care Technology. She has written five books and more than 150 professional articles and reports. Dr. McNeil has an A.B. in chemistry from Emmanuel College, an M.D. from Harvard Medical School, and a Ph.D. in biological chemistry from Harvard University.

Kathryn M. Mershon

Kathryn M. Mershon is vice president, nursing, at Humana, Inc., a position she has held since 1980. She holds an adjunct assistant professorship of nursing at Spalding University. From 1971 to 1980, Ms. Mershon was associate executive director-nursing at St. Joseph Infirmary (now Humana Hospital Audubon) in Louisville, Kentucky. Before that, she was a clinical nursing specialist at St. Joseph Infirmary, clinical instructor at St. Francis Xavier Hospital School of Nursing, and a staff nurse. She has a distinguished list of professional and community activities, including board of governors of the Federation of American Health Systems, board member of the National League for Nursing, and editorial review board of *Nursing & Health Care*. She is a former trustee of Spalding University and member of the advisory board of the University of Louisville's School of Nursing. She also served on the Louisville Board of Health and on the board of governors of Louisville General Hospital. She has made numerous public presentations on a variety of nursing-related issues. Her recent publications include: "Some Myths Pertaining to For-Profit Health Care," *Nursing Economics*, September/October 1986, and "Nurses and the Health Cost Crisis: A Strategic Approach to the Challenge," *Orthopaedic Nursing*, January/February 1985. Ms. Mershon received a B.S. in nursing from Spalding University and an M.S. in nursing from St. Louis University.

James J. Mongan*

James J. Mongan is the executive director of the Truman Medical Center, Kansas City, Missouri, and dean of the University of Missouri-Kansas City School of Medicine. He holds professorships in the School of Medicine and the School of Business and Public Administration at the University of Missouri-Kansas City. From 1979 to 1981, he was the associate director for health and human resources, Domestic Policy Staff, the White House. Dr. Mongan served as deputy assistant secretary for health policy at the Department of Health, Education and Welfare from 1977 to 1979, and was the Secretary's special assistant for National Health Insurance. For seven years before that, he was a professional staff member of the Committee on Finance, U.S. Senate. Dr. Mongan is a member of the board of trustees of the American Hospital Association and a member of the House of Delegates. He is on the board of the Council of Teaching Hospitals of the American Association of Medical Colleges and a member of the advisory committee for the Robert Wood Johnson Foundation's Program for Prepaid Managed Health Care. Dr. Mongan received his A.B. and M.D. from Stanford University.

Eric Muñoz

Eric Muñoz is the medical director of the University of Medicine and Dentistry at the University Hospital, New Jersey Medical School. He is also a member of the National Managed Care Division. From 1984 to 1988, Dr. Muñoz was head of the research division of the department of surgery at the Long Island Jewish-Hillside Medical Center, and assistant professor of surgery at the State University of New York at Stony Brook. He has been an instructor at the Yale University School of Medicine and New York Medical College. Dr. Muñoz is nationally recognized for his research on the DRG payment mechanism, which has focused on the higher costs of emergency hospital admissions. He is also a specialist on problems of health care delivery to the poor. Dr. Muñoz was president of the American Association of Puerto Rican Scientists and served on the board of that organization. His other numerous professional affiliations include Fellow of the American College of Surgeons, the Association for Academic Surgery, and the International Health Economics and Management Institute. He is certified by the American Board of Surgery. Dr. Muñoz has published more than 30 articles on health care costs. He received a B.A. in psychology from the University of Virginia, an M.D. from the Albert Einstein College of Medicine, and an M.B.A. in finance and economics from Columbia University. Dr. Muñoz trained in general and peripheral vascular surgery at Yale University.

John C. Nelson*

John C. Nelson is a practicing obstetrician and gynecologist in Salt Lake City, Utah. He has been involved in cost-containment efforts at local and state levels and is active in the American Cancer Society as well as numerous other medical and civic efforts. A member of the American Medical Association, Dr. Nelson is the delegate from Utah and serves on

the work group on evaluation, assessment, and control--Health Policy Agenda for the American People. He is a delegate to the Utah State Medical Association House of Delegates, and serves on the editorial board of the *Utah Medical Bulletin* as well as on the board of the Utah Health Cost Management Foundation. Dr. Nelson is also a member of the board of the Utah Professional Review Organization and the governor's Select Advisory Committee on Child Abuse and Neglect. He is former director of cost-containment for Blue Cross/Blue Shield of Utah. Dr. Nelson took his internship at the Providence Hospital in Portland, Oregon, and a residency with the Department of Obstetrics and Gynecology at the University of Utah. He is board-certified by the American Board of Obstetrics and Gynecology, and a Fellow of the American College of Obstetrics and Gynecology. He received his bachelor's degree in zoology from Utah State University and his M.D. from the Utah College of Medicine.

Elliott C. Roberts, Sr.

Elliott C. Roberts, Sr., is assistant secretary and chief executive officer of Charity Hospital at New Orleans, a position he has held since 1984. In this capacity, he implemented a reorganization of the Louisiana State Department of Health and Human Resources. Mr. Roberts holds an assistant professorship in the Department of Public Health and Preventive Medicine at Louisiana State University Medical School. He is also a preceptor in the Department of Health Systems Management at Tulane University School of Public Health and Tropical Medicine. Department of Health and Human Services. From 1980 to 1984, Mr. Roberts was chief executive officer of Cook County Hospital in Chicago. Before that, he was vice president and associate project director for Hyatt Medical Management Services, as well as, commissioner of hospitals and executive director of Detroit General Hospital. Mr. Roberts served as executive director at both Harlem Hospital Center (1969-72) and at Mercy Douglass Hospital in Philadelphia (1965-69). An active member of the American Hospital Association, Mr. Roberts served on its board of trustees for five years, as well as on the nominating committee, House of Delegates, and in other capacities. He has held similar positions of responsibility at the National Association of Public Hospitals and the Association of American Medical Colleges/Council on Teaching Hospitals. In addition to many other appointments, Mr. Roberts served on the Secretary's Commission on Nursing, Department of Health and Human Services. He received an M.A. in business administration-hospital administration from the George Washington University.

Leonard D. Schaeffer

Leonard D. Schaeffer is president and chief executive officer of Blue Cross of California. He came to Blue Cross from his position as president of Group Health, Inc. Mr. Schaeffer was formerly executive vice president and chief operating officer of the Student Loan Marketing Association. He served as administrator of the Health Care Financing Administration, Department of Health and Human Services, and as assistant secretary for management and budget in the Department of Health, Education and Welfare. Before that, Mr. Schaeffer was vice president of Citibank, N.A. He has held various positions with the state of Illinois, including director of the Bureau of Budget, head of the State Planning

Office, chairman of the Illinois Capital Development Board, and deputy director for management, Illinois Department of Mental Health and Developmental Disabilities. He was previously vice president of a private investment banking firm, and a consultant for Arthur Anderson & Company. A Kellogg Fellow, Mr. Schaeffer is a member of the board of the University of Southern California, School of Public Administration; the Cultural Foundation; Town Hall of California; United Way; and *Managed Healthcare*. He was graduated from Princeton University.

Bert Seidman*

Bert Seidman has been the director of the Department of Occupational Safety, Health and Social Security of the AFL-CIO, Washington, D.C., since 1983. From 1962 to 1966, he was the AFL-CIO European economic representative stationed in Paris and then in Geneva. Before that, he served for 14 years as an economist in the research department of the AFL and the AFL-CIO. In 1966, he became director of the AFL-CIO Social Security Department. He was a member of the U.S. labor delegation to the annual conference of the International Labor Organization (ILO) from 1958 to 1976 and, from 1972 to 1975, was a member of the ILO governing body. In 1973 and 1974, he was the U.S. worker delegate to the ILO conference. He has served on numerous committees, including the Federal Advisory Council on Employment Security, the Advisory Council on Health Insurance for the Disabled, the Task Force on Medicaid and Related Programs, the Advisory Council on Social Security, the Federal Hospital Council, the Health Insurance Benefits Advisory Council, the Blue Cross Advisory Committee, and the 1981 White House Conference on Aging (the Advisory Committee and chairman of the Technical Committee on Retirement Income). At present, he is a member of the HMO Industry Council, the Brookings Institution Advisory Panel on Long-Term Care, and the National Advisory Committee to the Robert Wood Johnson Foundation on Community Programs for Affordable Health Care. He is on the board of the National Council of Senior Citizens and the National Council on Aging, and is a vice president of the National Consumers League.

Jack K. Shelton

Jack K. Shelton is manager of the Employee Insurance Department of the Ford Motor Company, which he joined in 1956. He is responsible for the financial control and analysis of nearly all employee benefit plans. In this capacity, he participates in union negotiations, relations with insurance carriers, and financial control of company-administered plans. He also reviews changes in wage and benefit programs for foreign subsidiaries. Mr. Shelton is actively involved in a number of local and national health care organizations, serving as a director of the National Fund for Medical Education, a director of Blue Cross and Blue Shield of Michigan, and a member of the Statewide Health Coordinating Council of Michigan. In 1985, he was a member of an Office of Technology Assessment Advisory Panel on Alternative Physician Payments for Medicare and chairman of the Employer Prospective Payment Advisory Commission for the Washington Business Group on Health. He is past chairman of the National Industry Council on HMO Development, the Michigan Health Economics Coalition, the Michigan Hospital Capacity Reduction Corporation, and

the Health Alliance Plan (Michigan's largest HMO). Mr. Shelton received his B.S. and M.S. degrees in industrial psychology from Oklahoma State University.

J. B. Silvers

J. B. Silvers is co-director of the Health Systems Management Center of Case Western Reserve University. He is also the William M. and Elizabeth C. Treuhaft Professor of Management and professor of banking and finance at the University's Weatherhead School of Management and professor of epidemiology and biostatistics at the School of Medicine. Before joining Case Western Reserve, Dr. Silvers was a faculty member at the business schools of Indiana, Harvard, and Stanford. At Harvard he directed the Program for Financial Management and Strategy in Health for five years and served on the faculty of the Program for Health Systems Management for ten years. Dr. Silvers served the U.S. Department of Health and Human Services as a member of the Secretary's Commission on Nursing and as a member of the Health Care Technology Study Section of the National Center for Health Services Research. During 1983-84, he chaired the Governor's Commission on Ohio Health Care Costs. He has written extensively in the fields of corporate financial management, and health care and hospital finance. He also serves as a consultant or adviser to numerous private organizations. Dr. Silvers received a Ph.D. in finance and economics from Stanford University and M.S. and B.S. degrees from Purdue University in industrial administration and engineering, respectively.

Bruce C. Vladeck

Bruce C. Vladeck is president of the United Hospital Fund of New York. Immediately before joining that organization, Dr. Vladeck was assistant vice president of the Robert Wood Johnson Foundation. From 1979 to 1982, he was assistant commissioner for health planning and resources development of the New Jersey State Department of Health. In that position, he was director of the State Health Planning and Development Agency, where he oversaw the implementation of New Jersey's all payer, DRG-based hospital prospective payment system. Dr. Vladeck taught for four and one-half years at Columbia University, and has served on the adjunct faculty of Rutgers, Princeton, the College of Medicine and Dentistry of New Jersey, and New York University. He is the author of *Unloving Care: The Nursing Home Tragedy*, *In Sickness and in Health: The Mission of Voluntary Health Care Institutions*, and has written numerous articles and book chapters on health policy, health care finance, and health politics. He is a member of the New York State Council on Graduate Medical Education, the executive committee of the New York Blood Center, the Advisory Committee to the Wagner School of Public Service of New York University, the Visiting Committee of the School of Management and Urban Policy of the New York School for Social Research, and the Institute of Medicine of the National Academy of Science. Dr. Vladeck is the president of the National Committee for Labor Israel-Histadrut. He received his bachelor's degree in government from Harvard College, and his M.A. and Ph.D. in political science from the University of Michigan.

Sankey V. Williams

Sankey V. Williams is director of the Robert Wood Johnson Foundation Clinical Scholars Program at the University of Pennsylvania. He also serves as professor of medicine at the Hospital of the University of Pennsylvania and professor of health care systems at the university's Wharton School. In addition, he is associate director for medical affairs in the Wharton School's Leonard Davis Institute of Health Economics. He is an associate in the Clinical Epidemiology Unit of the university and previously served as associate director for clinical research at the University of Pennsylvania's Center for the Study of Aging. He was a Henry J. Kaiser Family Foundation Faculty Scholar in general internal medicine from 1981 to 1986. Dr. Williams currently serves as an associate editor of the *Journal of General Internal Medicine*. Dr. Williams, who is certified by the American Board of Internal Medicine, has published and lectured widely in many fields, including medical decision making, physician behavior, and hospital case-mix management. Dr. Williams received a B.A. from Princeton University and an M.D. from Harvard Medical School. He completed his internship and residency in medicine at the Hospital of the University of Pennsylvania and was a Robert Wood Johnson Foundation Clinical Scholar at the university.

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*Term expired 1989